

SERIES **4**
450
451

LCD TV

user manual

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Model _____ Serial No. _____



Important Warranty Information Regarding Television Format Viewing

Wide screen format LCD Displays (16:9, the aspect ratio of the screen width to height) are primarily designed to view wide screen format full-motion video. The images displayed on them should primarily be in the wide screen 16:9 ratio format, or expanded to fill the screen if your model offers this feature and the images are constantly moving. Displaying stationary graphics and images on screen, such as the dark side-bars on nonexpanded standard format television video and programming, should be limited to no more than 5% of the total television viewing per week.

Additionally, viewing other stationary images and text such as stock market reports, video game displays, station logos, web sites or computer graphics and patterns, should be limited as described above for all televisions. Displaying stationary images that exceed the above guidelines can cause uneven aging of LCD Displays that leave subtle, but permanent burned-in ghost images in the LCD picture. To avoid this, vary the programming and images, and primarily display full screen moving images, not stationary patterns or dark bars.

On LCD models that offer picture sizing features, use these controls to view different formats as a full screen picture.

Be careful in the selection and duration of television formats used for viewing. Uneven LCD aging as a result of format selection and use, as well as burned-in images, are not covered by your Samsung limited warranty.

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SAMSUNG ELECTRONICS NORTH AMERICAN LIMITED WARRANTY STATEMENT

Subject to the requirements, conditions, exclusions and limitations of the original Limited Warranty supplied with Samsung Electronics (SAMSUNG) products, and the requirements, conditions, exclusions and limitations contained herein, SAMSUNG will additionally provide Warranty Repair Service in the United States on SAMSUNG products purchased in Canada, and in Canada on SAMSUNG products purchased in the United States, for the warranty period originally specified, and to the Original Purchaser only.

The above described warranty repairs must be performed by a SAMSUNG Authorized Service Center. Along with this Statement, the Original Limited Warranty Statement and a dated Bill of Sale as Proof of Purchase must be presented to the Service Center. Transportation to and from the Service Center is the responsibility of the purchaser.

Conditions covered are limited only to manufacturing defects in material or workmanship, and only those encountered in normal use of the product.

Excluded, but not limited to, are any originally specified provisions for, in-home or on-site services, minimum or maximum repair times, exchanges or replacements, accessories, options, upgrades, or consumables.

For the location of a SAMSUNG Authorized Service Center, please call toll-free:

In the United States : 1-800-SAMSUNG (1-800-726-7864)

In Canada : 1-800-SAMSUNG

➤ See the warranty card for more information on warranty terms.

Precautions When Displaying a Still Image

A still image may cause permanent damage to the TV screen

- Do not display a still image on the LCD panel for more than 2 hours as it can cause screen image retention. This image retention is also known as "screen burn". To avoid such image retention, reduce the degree of brightness and contrast of the screen when displaying a still image.



Watching the LCD TV in 4:3 format for a long period of time may leave traces of borders displayed on the left, right and center of the screen caused by the difference of light emission on the screen.

Playing a DVD or a game console may cause a similar effect to the screen.

Damages caused by the above effect are not covered by the Warranty.

- Displaying still images from Video games and PC for longer than a certain period of time may produce partial after-images. To prevent this effect, reduce the 'brightness' and 'contrast' when displaying still images.

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Symbol

One-Touch
Button

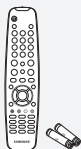
General Information

List of Features

- ♦ Adjustable picture settings that can be stored in the TV's memory.
- ♦ Automatic timer to turn the TV on and off.
- ♦ A special sleep timer.
- ♦ Excellent Digital Interface & Networking :
With a built-in HD digital tuner, non-subscription HD broadcasts can be viewed with no Cable Box/Satellite receiver (Set-Top Box) needed.
- ♦ HDMI/DVI connection of your PC to this TV.
- ♦ Excellent Picture Quality
- ♦ SRS TruSurround XT
 - SRS TruSurround XT provides a virtual surround system.

Accessories

Please make sure the following items are included with your LCD TV.
If any items are missing, contact your dealer.



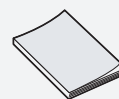
Remote Control & Batteries (AAA x 2)
(LN19A450C1D: BN59-00678A)
(LN19A451C1D: BN59-00678B)
(LN22A450C1D: BN59-00678A)
(LN22A451C1D: BN59-00678B)



Power Cord
(3903-000144)



Cleaning Cloth
(BN63-01798A)



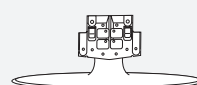
Owner's Instructions



Warranty Card / Registration Card /
Safety Guide Manual
(Not available in all locations)



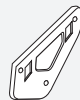
Cover-Bottom
(LN22A450C1D: BN63-04269A)
(LN22A451C1D: BN63-04269D)



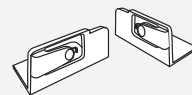
Stand
(LN19A450C1D: BN96-04794A)
(LN19A451C1D: BN96-04794B)
(LN22A450C1D: BN96-06463A)
(LN22A451C1D: BN96-06463B)



Stand Screw(M4XL16)
(LN22A450C1D: 6002-001294)
(LN22A451C1D: 6003-001324)



Wall Mount kit
(LN19A450C1D: BN96-04960A)
(LN19A451C1D: BN96-04960A)



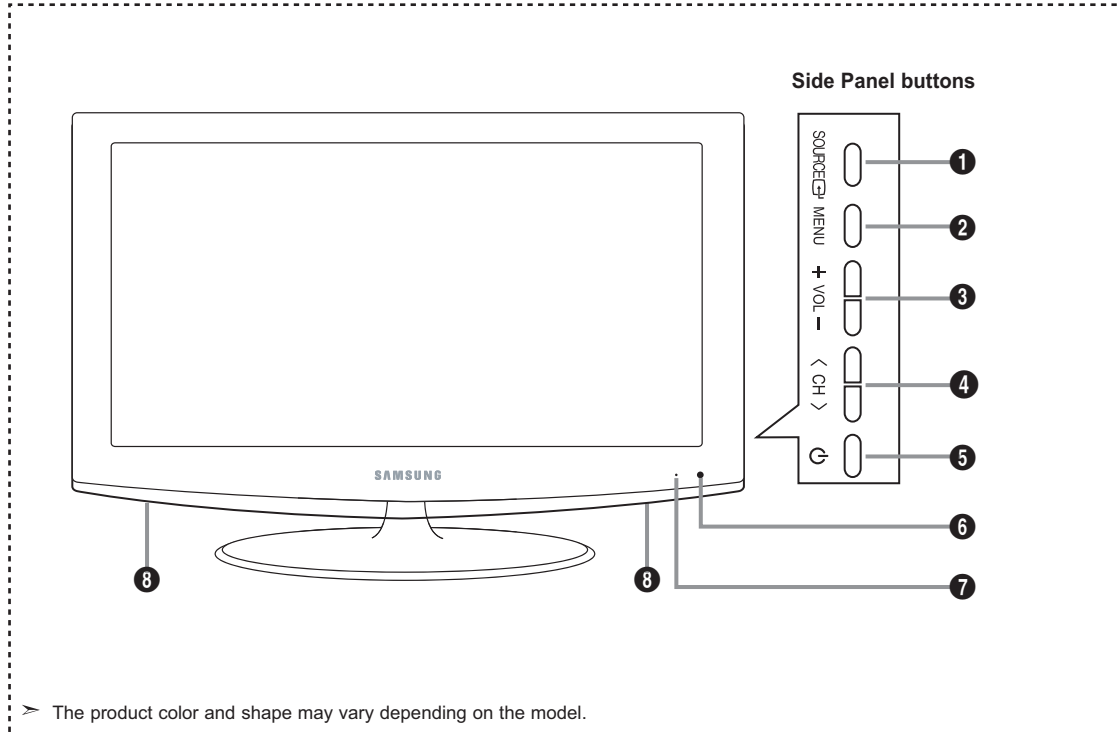
Decoration Cover
LN19A450C1D: Right - BN63-04242A
Left - BN63-04254A
LN19A451C1D: Right - BN63-04242B
Left - BN63-04254B

> The items color and shape may vary depending on the model.

Viewing the Control Panel

Buttons on the Lower-Right Part of the Panel

The buttons on the lower-right panel control your TV's basic features, including the on-screen menu. To use the more advanced features, you must use the remote control.



1 SOURCE

Toggles between all the available input sources (TV, AV, S-Video, Component, PC, HDMI).
In the on-screen menu, use this button as you would use the **ENTER** button on the remote control.

2 MENU

Press to see an on-screen menu of your TV's features.

3 + VOL -

Press to increase or decrease the volume.
In the on-screen menu, use the **+ VOL -** buttons as you would use the and buttons on the remote control.

4 < CH >

Press to change channels.
In the on-screen menu, use the **< CH >** buttons as you would use the and buttons on the remote control.

5 (POWER)

Press to turn the TV on and off.

6 REMOTE CONTROL SENSOR

Aim the remote control towards this spot on the TV.

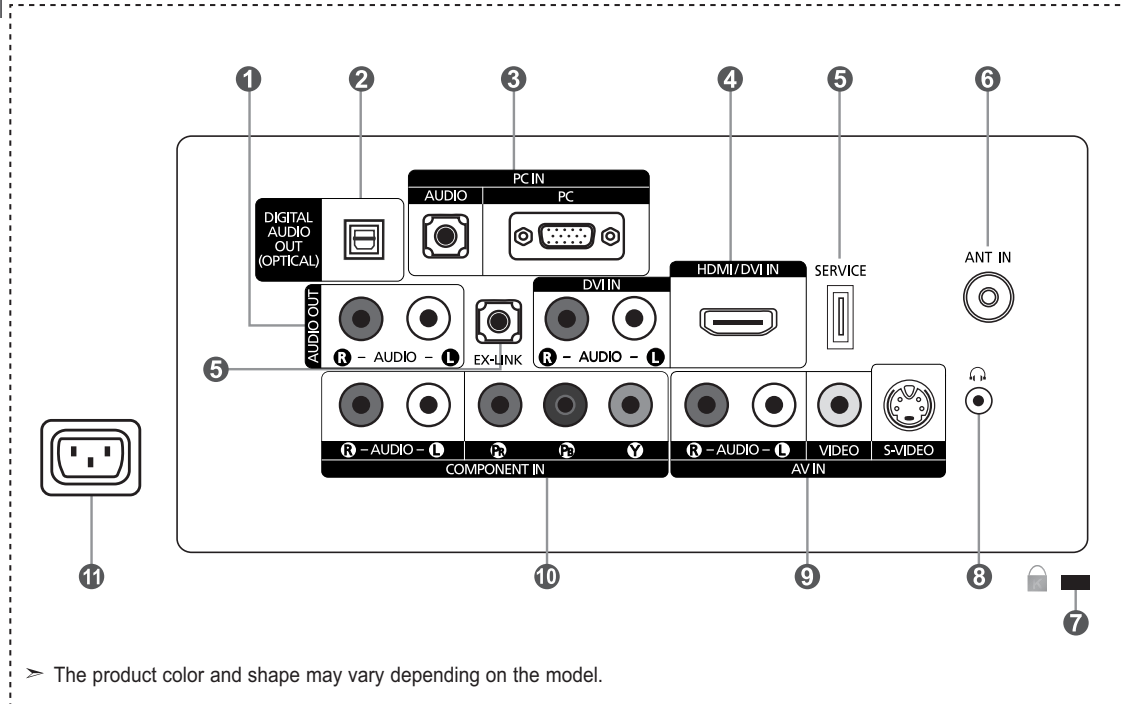
7 POWER INDICATOR

Blinks and turns off when the power is on and lights up in stand-by mode.

8 SPEAKERS

Viewing the Connection Panel

Use the connection panel jacks to connect A/V components that will be connected continuously, such as DVD players or a VCR. For more information on connecting equipment, see pages 6~12.



➤ The product color and shape may vary depending on the model.

1 AUDIO OUT

Connects to the audio input jacks on your Amplifier/ Home theater.

2 DIGITAL AUDIO OUT (OPTICAL)

Connects to a Digital Audio component.

3 PC IN [PC] / [AUDIO]

Connects to the video and audio output jacks on your PC.

4 HDMI/DVI IN / DVI IN [R-AUDIO-L]

Connects to the HDMI jack of a device with an HDMI output.

Use the HDMI/DVI IN jack for DVI connection to an external device.

Use a DVI to HDMI cable or DVI-HDMI adapter (DVI to HDMI) for video connection and the DVI IN [R-AUDIO-L] jacks for audio.

- No sound connection is needed for an HDMI to HDMI connection.

- When using an HDMI/DVI cable connection, you must use the HDMI/DVI IN jack.

5 SERVICE, EX-LINK

Connector for SERVICE only.

6 ANT IN

Connects to an antenna or cable TV system.

7 KENSINGTON LOCK

The Kensington Lock (optional) is a device used to physically fix the system when used in a public place. If you want to use a locking device, contact the dealer where you purchased the TV.

➤ The location of the Kensington Lock may be different depending on its model.

8 HEADPHONE

Connects a set of external headphones for private listening.

9 AV IN

Video and audio inputs for external devices, such as a camcorder or VCR.

S-VIDEO

Connects an S-Video signal from a camcorder or VCR.

10 COMPONENT IN

The COMPONENT IN jack is also used as the AV IN jack.

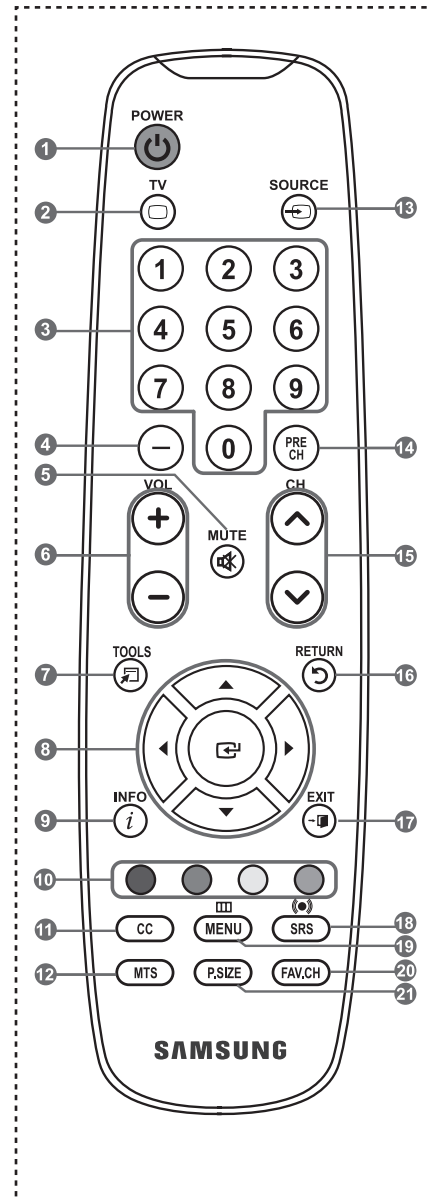
11 POWER INPUT

Connects the supplied power cord.

Remote Control

You can use the remote control up to a distance of about 23 feet from the TV.

- 1 POWER**
Turns the TV on and off.
- 2 TV**
Selects the TV mode directly.
- 3 NUMERIC BUTTONS**
Press to change the channel.
- 4 \ominus**
Press to select additional channels(digital and analog) being broadcast by the same station. For example, to select channel "54-3", press "54", then press " \ominus " and "3".
- 5 MUTE**
Press to temporarily cut off the sound.
- 6 VOL $+$ / VOL $-$**
Press to increase or decrease the volume.
- 7 TOOLS**
Use to quickly select frequently used functions.
- 8 UP \blacktriangle / DOWN \blacktriangledown / LEFT \blacktriangleleft / RIGHT \blacktriangleright / ENTER \blacksquare**
Use to select on-screen menu items and change menu values.
- 9 INFO**
Press to display information on the TV screen.
- 10 COLOR BUTTONS**
Use these buttons in the Channel list, etc.
- 11 CC**
Controls the caption decoder.
- 12 MTS**
Press to choose stereo, mono or Separate Audio Program (SAP broadcast).
- 13 SOURCE**
Press to display and select the available video sources.
- 14 PRE CH**
Tunes to the previous channel.
- 15 CH \wedge / CH \vee**
Press to change channels.
- 16 RETURN**
Returns to the previous menu.
- 17 EXIT**
Press to exit the menu.
- 18 SRS**
Selects SRS TruSurround XT mode.
- 19 MENU**
Displays the main on-screen menu.
- 20 FAV.CH**
Press to switch to your favorite channels.
- 21 P.SIZE**
Picture size selection.



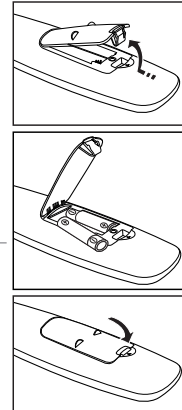
> The performance of the remote control may be affected by bright light.

Installing Batteries in the Remote Control

1. Lift the cover at the back of the remote control upward as shown in the figure.
 2. Install two AAA size batteries.
 - Make sure to match the "+" and "-" ends of the batteries with the diagram inside the compartment.
 3. Replace the cover.
 - Remove the batteries and store them in a cool, dry place if you won't be using the remote control for a long time.
- The remote control can be used up to about 23 feet from the TV.
(Assuming typical TV usage, the batteries should last for about one year.)

➤ **If the remote control doesn't work, check the following:**

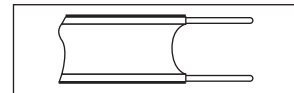
1. Is the TV power on?
2. Are the plus and minus ends of the batteries reversed?
3. Are the batteries drained?
4. Is there a power outage or is the power cord unplugged?
5. Is there a special fluorescent light or neon sign nearby?



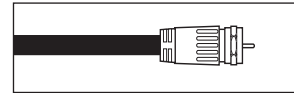
Connections

Connecting VHF and UHF Antennas

If your antenna has a set of leads that look like the diagram to the right, see "Antennas with 300 Ω Flat Twin Leads" below.



If your antenna has one lead that looks like the diagram to the right, see "Antennas with 75 Ω Round Leads".

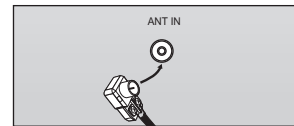
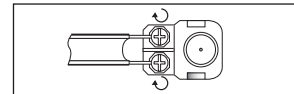


If you have two antennas, see "Separate VHF and UHF Antennas".

Antennas with 300 Ω Flat Twin Leads

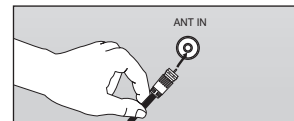
If you are using an off-air antenna (such as a roof antenna or "rabbit ears") that has 300 Ω twin flat leads, follow the directions below.

1. Place the wires from the twin leads under the screws on a 300-75 Ω adapter (not supplied).
Use a screwdriver to tighten the screws.
2. Plug the adaptor into the ANT IN terminal on the back of the TV.



Antennas with 75 Ω Round Leads

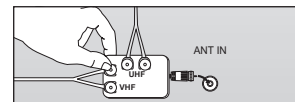
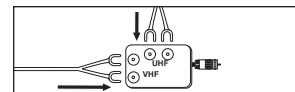
1. Plug the antenna lead into the ANT IN terminal on the back of the TV.



Separate VHF and UHF Antennas

If you have two separate antennas for your TV (one VHF and one UHF), you must combine the two antenna signals before connecting the antennas to the TV. This procedure requires an optional combiner-adaptor (available at most electronics shops).

1. Connect both antenna leads to the combiner.
2. Plug the combiner into the ANT IN terminal on the bottom of the rear panel.

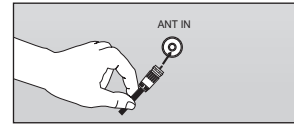


Connecting Cable TV

To connect to a cable TV system, follow the instructions below.

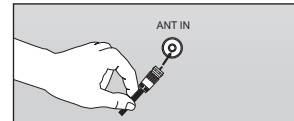
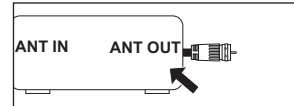
Cable without a Cable Box

1. Plug the incoming cable into the ANT IN terminal on the back of the TV.
 ➤ Because this TV is cable-ready, you do not need a cable box to view unscrambled cable channels.



Connecting to a Cable Box that Descrambles All Channels

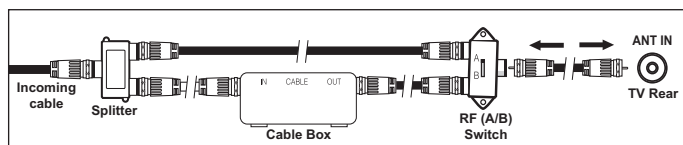
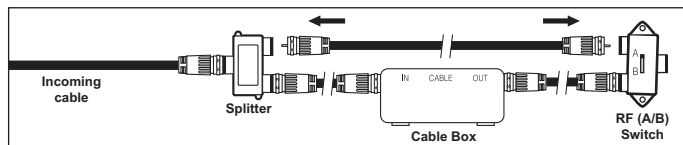
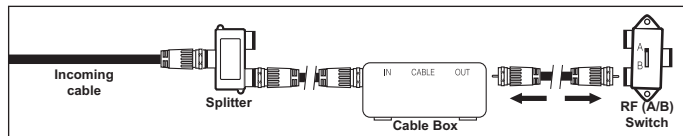
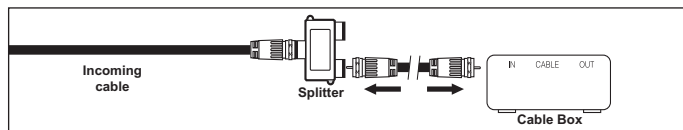
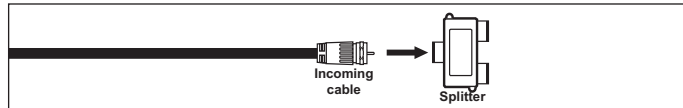
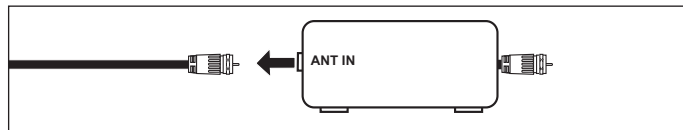
1. Find the cable that is connected to the ANT OUT terminal on your cable box.
 ➤ This terminal might be labeled "ANT OUT", "VHF OUT" or simply, "OUT".
2. Connect the other end of this cable to the ANT IN terminal on the back of the TV.



Connecting to a Cable Box that Descrambles Some Channels

If your cable box descrambles only some channels (such as premium channels), follow the instructions below. You will need a two-way splitter, an RF (A/B) switch and four lengths of RF cable. (These items are available at most electronics stores.)

1. Find and disconnect the cable that is connected to the ANT IN terminal on your cable box.
 ➤ This terminal might be labeled "ANT IN", "VHF IN" or simply, "IN".
2. Connect this cable to a two-way splitter.
3. Connect an RF cable between the OUTPUT terminal on the splitter and the IN terminal on the cable box.
4. Connect an RF cable between the ANT OUT terminal on the cable box and the B-IN terminal on the RF(A/B) switch.
5. Connect another cable between the other OUT terminal on the splitter and the A-IN terminal on the RF (A/B) switch.
6. Connect the last RF cable between the OUT terminal on the RF (A/B) switch and the ANT IN terminal on the rear of the TV.

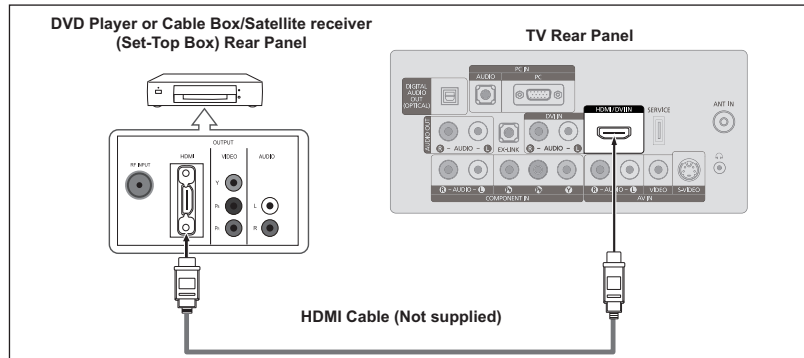


After you have made this connection, set the A/B switch to the "A" position for normal viewing. Set the A/B switch to the "B" position to view scrambled channels. (When you set the A/B switch to "B", you will need to tune your TV to the cable box's output channel, which is usually channel 3 or 4.)

Connecting a DVD Player or Cable Box/Satellite receiver (Set-Top Box) via HDMI

This connection can only be made if there is an HDMI Output connector on the external device.

1. Connect an HDMI Cable between the HDMI/DVI IN jack on the TV and the HDMI jack on the DVD Player or Cable Box/Satellite receiver (Set-Top Box).



> What is HDMI?

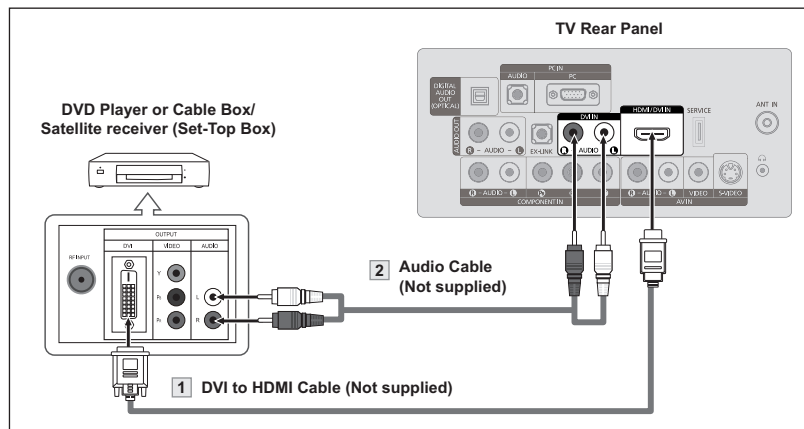
- HDMI(High-Definition Multimedia Interface), is an interface that enables the transmission of digital audio and video signals using a single cable.
- The difference between HDMI and DVI is that the HDMI device is smaller in size and has the HDCP (High Bandwidth Digital Copy Protection) coding feature installed.

> Each DVD Player or Cable Box/Satellite receiver (Set-Top Box) has a different back panel configuration.

Connecting a DVD Player or Cable Box/Satellite receiver (Set-Top Box) via DVI

This connection can only be made if there is a DVI Output connector on the external device.

1. Connect a DVI to HDMI Cable or DVI-HDMI Adapter between the HDMI/DVI IN jack on the TV and the DVI jack on the DVD Player or Cable Box/Satellite receiver (Set-Top Box).
2. Connect Audio Cables between the DVI IN [R-AUDIO-L] jack on the TV and the DVD Player or Cable Box/Satellite receiver (Set-Top Box).



> Each DVD Player or Cable Box/Satellite receiver (Set-Top Box) has a different back panel configuration.

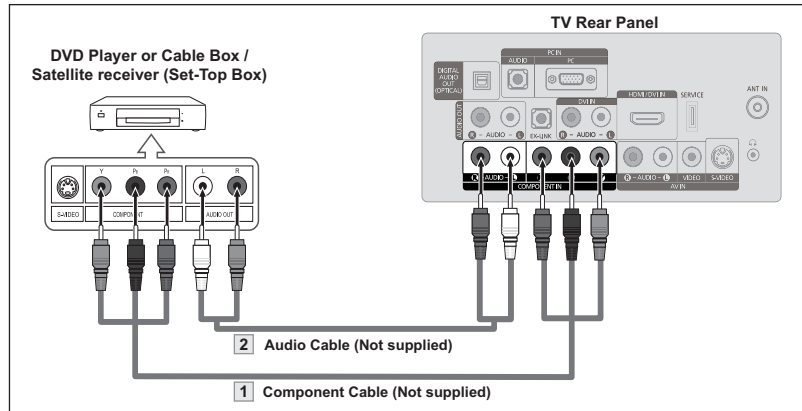
> When connecting a DVD Player or Cable Box/Satellite receiver (Set-Top Box), match the color of the connection terminal to the cable.

> When using an HDMI/DVI cable connection, you must use the HDMI/DVI IN jack.

Connecting a DVD Player or Cable Box/Satellite receiver (Set-Top Box) via Component cables

The rear panel jacks on your TV make it easy to connect a DVD Player or Cable Box/Satellite receiver (Set-Top Box) to your TV.

1. Connect a Component Cable between the COMPONENT IN [Y, P_B, P_R] jacks on the TV and the COMPONENT [Y, P_B, P_R] jacks on the DVD Player or Cable Box/Satellite receiver (Set-Top Box).
2. Connect Audio Cables between the COMPONENT IN [R-AUDIO-L] jacks on the TV and the AUDIO OUT jacks on the DVD Player or Cable Box/Satellite receiver (Set-Top Box).

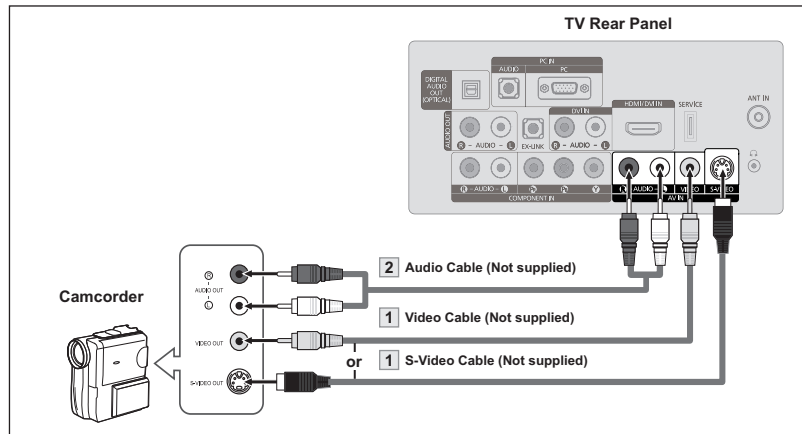


- Component video separates the video into Y (Luminance (brightness)), Pb (Blue) and Pr (Red) for enhanced video quality. Be sure to match the component video and audio connections. For example, if connecting a Component video cable to COMPONENT IN, connect the audio cable to COMPONENT IN also.
- Each DVD Player or Cable Box/Satellite receiver (Set-Top Box) has a different back panel configuration.
- When connecting a DVD Player or Cable Box/Satellite receiver (Set-Top Box), match the color of the connection terminal to the cable.

Connecting a Camcorder

They allow you to view the camcorder tapes without using a VCR.

1. Connect a Video Cable (or S-Video Cable) between the AV IN [VIDEO] (or S-VIDEO) jack on the TV and the VIDEO OUT (or S-VIDEO OUT) jack on the camcorder.
2. Connect Audio Cables between the AV IN [R-AUDIO-L] jacks on the TV and the AUDIO OUT jacks on the camcorder.



- Each Camcorder has a different back panel configuration.
- When connecting a Camcorder, match the color of the connection terminal to the cable.

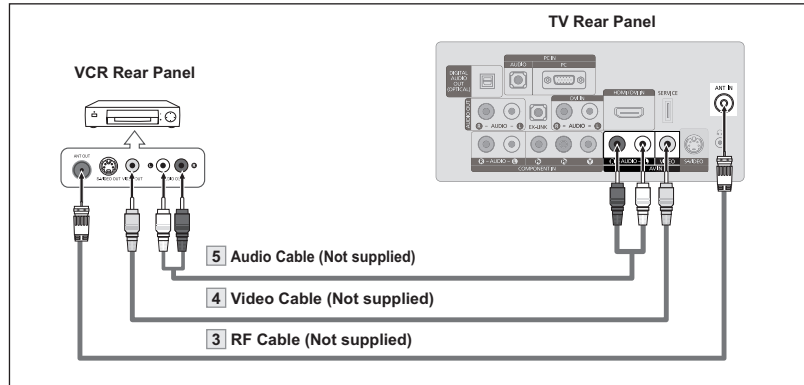
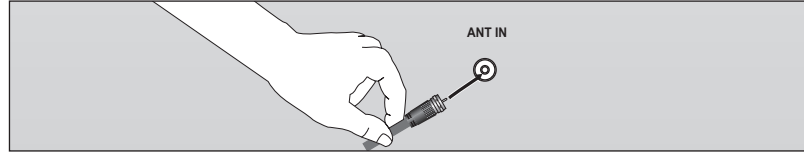
Connecting a VCR

Video Connection

These instructions assume that you have already connected your TV to an antenna or a cable TV system (according to the instructions on pages 6~7). Skip step 1 if you have not yet connected to an antenna or a cable system.

1. Unplug the cable or antenna from the back of the TV.
2. Connect the cable or antenna to the ANT IN terminal on the back of the VCR.
3. Connect an RF Cable between the ANT OUT terminal on the VCR and the ANT IN terminal on the TV.
4. Connect a Video Cable between the VIDEO OUT jack on the VCR and the AV IN [VIDEO] jack on the TV.
5. Connect Audio Cables between the AUDIO OUT jacks on the VCR and the AV IN [R-AUDIO-L] jacks on the TV.

> If you have a "mono" (non-stereo) VCR, use a Y-connector (not supplied) to hook up to the right and left audio input jacks of the TV. If your VCR is stereo, you must connect two cables.



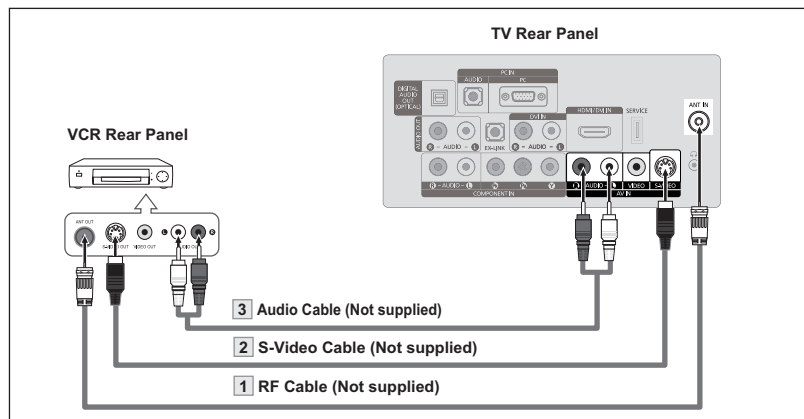
Follow the instructions in "Viewing a VCR or Camcorder Tape" to view your VCR tape.

- > Each VCR has a different back panel configuration.
- > When connecting a VCR, match the color of the connection terminal to the cable.

S-Video Connection

Your Samsung TV can be connected to an S-Video jack on a VCR. (This connection delivers a better picture when compared to the regular Video connection above.)

1. To begin, follow steps 1~3 in the previous section to connect the antenna or cable to your VCR and your TV.
2. Connect an S-Video Cable between the S-VIDEO OUT jack on the VCR and the AV IN [S-VIDEO] jack on the TV.
3. Connect Audio Cables between the AUDIO OUT jacks on the VCR and the AV IN [R-AUDIO-L] jacks on the TV.



An S-Video cable may be included with a VCR. (If not, check your local electronics store.)

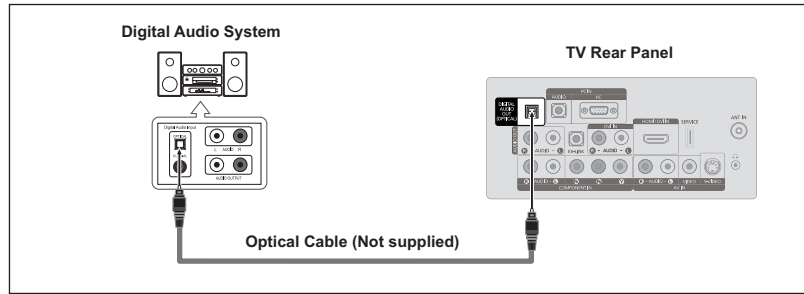
- > Each VCR has a different back panel configuration.
- > When connecting a VCR, match the color of the connection terminal to the cable.

Connecting a Digital Audio System

The rear panel jacks on your TV make it easy to connect a Digital Audio System (Home theater/Receiver) to your TV.

1. Connect an Optical Cable between the "DIGITAL AUDIO OUT (OPTICAL)" jacks on the TV and the Digital Audio Input jacks on the Digital Audio System.

When a Digital Audio System is connected to the "DIGITAL AUDIO OUT (OPTICAL)" jack: Decrease the volume of the TV and adjust the volume level with the system's volume control.

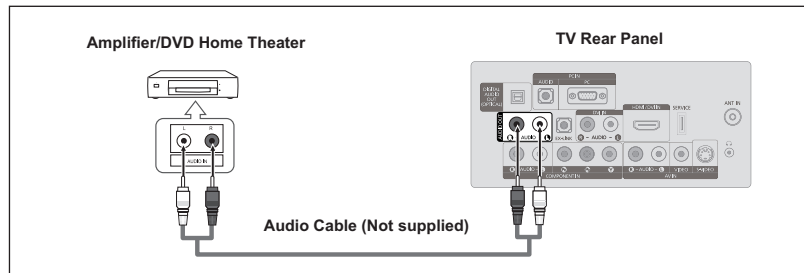


- 5.1CH audio is possible when the TV is connected to an external device supporting 5.1CH.
- Each Digital Audio System has a different back panel configuration.
- When the receiver (home theater) is set to On, you can hear sound output from the TV's Optical jack. When the TV is displaying a DTV(air) signal, the TV will send out 5.1 channel sound to the Home theater receiver. When the source is a digital component such as a DVD and is connected to the TV via HDMI, only 2 channel sound will be heard from the Home Theater receiver. If you want to hear 5.1 channel audio, connect the DIGITAL AUDIO OUT (OPTICAL) jack on the DVD player or Cable/Satellite Box directly to an Amplifier or Home Theater, not the TV.

Connecting an Amplifier/DVD Home Theater

1. Connect Audio Cables between the AUDIO OUT [R-AUDIO-L] jacks on the TV and AUDIO IN [R-AUDIO-L] jacks on the Amplifier/DVD Home Theater.

When an audio amplifier is connected to the "AUDIO OUT [R-AUDIO-L]" jacks: Decrease the volume of the TV and adjust the volume level with the Amplifier's volume control.

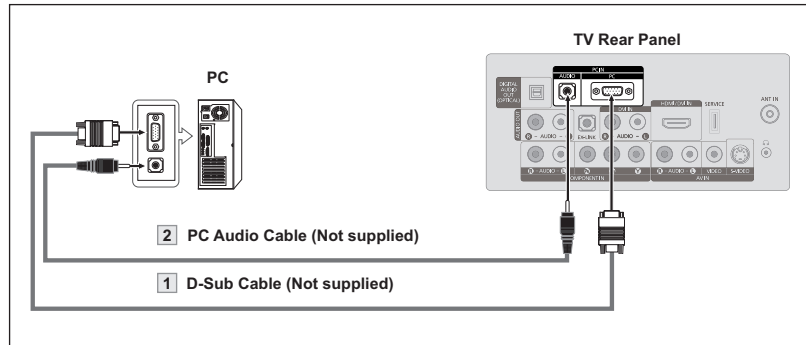


- Each Amplifier/DVD Home Theater has a different back panel configuration.
- When connecting an Amplifier/DVD Home Theater, match the color of the connection terminal to the cable.

Connecting a PC

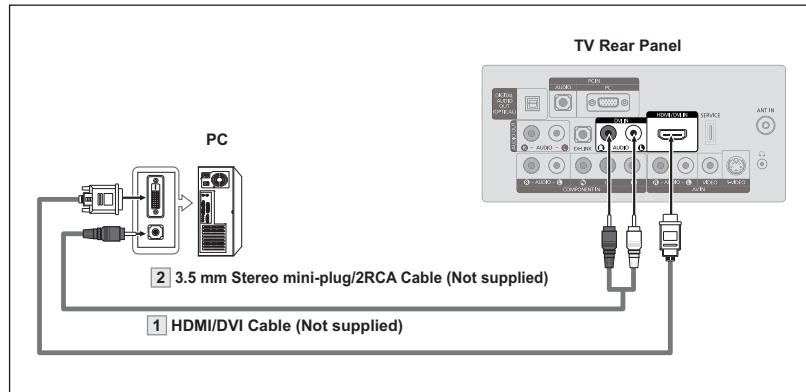
Using the D-Sub Cable

1. Connect a D-Sub Cable between PC IN [PC] connector on the TV and the PC output connector on your computer.
2. Connect a PC Audio Cable between the PC IN [AUDIO] jack on the TV and the Audio Out jack of the sound card on your computer.



Using the HDMI/DVI Cable

1. Connect a HDMI/DVI cable between the HDMI/DVI IN jack on the TV and the PC output jack on your computer.
2. Connect a 3.5 mm Stereo mini-plug/2RCA Cable between the DVI IN [R-AUDIO-L] jack on the TV and the Audio Out jack of the sound card on your computer.



- Each PC has a different back panel configuration.
- When connecting a PC, match the color of the connection terminal to the cable.
- When using an HDMI/DVI cable connection, you must use the HDMI/DVI IN jack.

Operation

Turning the TV On and Off

Press the **POWER**  button on the remote control.

You can also use the **POWER**  button on the TV.




Plug & Play Feature


When the TV is initially powered on, basic settings proceed automatically and subsequently.


- The Screen Saver is activated if there is no remote control key input for longer than 1 minute while "Plug & Play" is running.
- The Screen Saver is activated if there is no operating signal for longer than 15 minutes.

1. Press the **POWER** button on the remote control.

The message "Menu Language, Store Demo, Channels and Time will be set." is displayed.


Press the **ENTER**  button, then "Select the language of the OSD" menu is automatically displayed.

2. Press the **▲** or **▼** button to select language, then press the **ENTER**  button. The message "Select 'Home Use' when installing this TV in your home." is displayed.

3. Press the **◀** or **▶** button to select "Store Demo" or "Home Use", then press the **ENTER**  button.

The message "Select the antennas to memorize." is displayed.


- We recommend setting the TV to "Home Use" mode for the best picture in your home environment.
- "Store Demo" mode is only intended for use in retail environments.
- If the unit is accidentally set to "Store Demo" mode and you want to return to "Home Use" (Standard): Press the Volume button on the TV. When the volume OSD is displayed, press and hold the **MENU** button on the TV for 5 seconds.

4. Press the **▲** or **▼** button to memorize the channels of the selected connection. Press the **ENTER**  button to select "Start".


➤ Air: "Air" antenna signal.


Cable: "Cable" antenna signal.

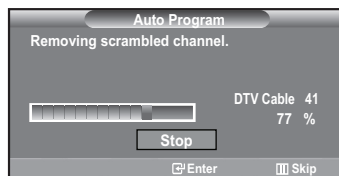
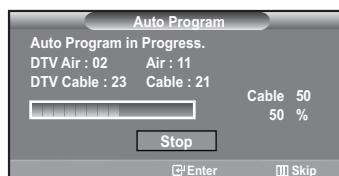
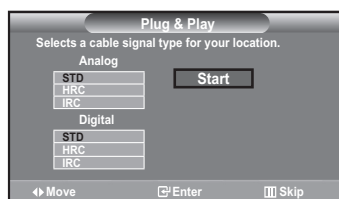
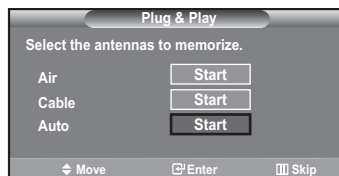
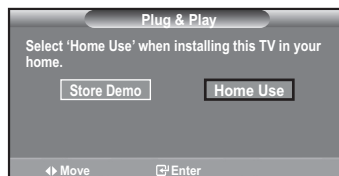
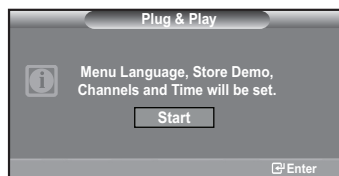
Auto: "Air" and "Cable" antenna signals.

- In Cable mode, you can select the correct signal source among STD, HRC, and IRC by pressing the **▲**, **▼**, **◀** or **▶** button, then press the **ENTER**  button. If you have Digital cable, select the cable system signal source for both Analog and Digital. Contact your local cable company to identify the type of cable system that exists in your particular area.

5. The TV will begin memorizing all of the available channels.

➤ To stop the search before it has finished, press the **ENTER**  button with "Stop" selected.

- After all the available channels are stored, it starts to remove scrambled channels (see page 28). The Auto program menu then reappears. Press the **ENTER**  button when channel memorization is complete. The message "Set the Clock Mode." is displayed.

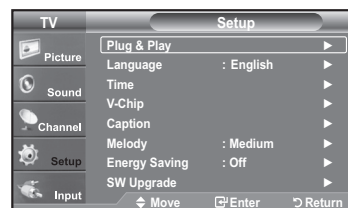
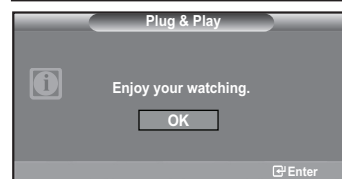
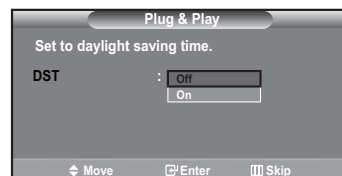
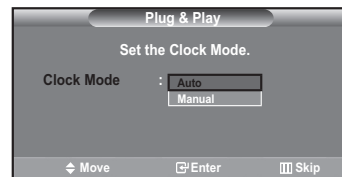
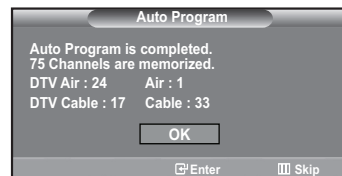


6. Press the **ENTER** button.
Press the **▲** or **▼** button to select "Auto", then Press the **ENTER** button.
The message "Set to daylight saving time." is displayed.

If you select "Manual", "Enter the current date and time." is displayed.
(See page 37)
7. Press the **▲** or **▼** button to select "Off" or "On", then press the **ENTER** button.
The message "Select the time zone in which you live." is displayed.
8. Press the **▲** or **▼** button to highlight the time zone for your local area.
Press the **ENTER** button. If you have received a digital signal, the time will be set automatically.
If not, see page 37 to set the clock.
9. The message "Enjoy your watching." is displayed.
When you have finished, press the **ENTER** button.

If you want to reset this feature...

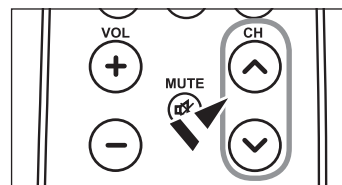
1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Setup", then press the **ENTER** button.
2. Press the **ENTER** button again to select "Plug & Play".
For further details on setting up options, refer to the pages 13~14.
➤ The "Plug & Play" feature is only available in the TV mode.



Changing Channels

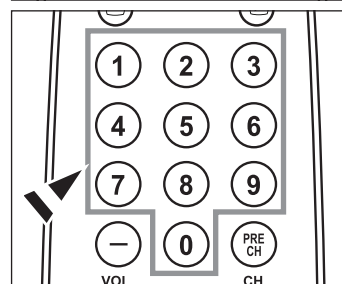
Using the Channel Buttons

1. Press the **CH▲** or **CH▼** button to change channels.
➤ When you press the **CH▲** or **CH▼** button, the TV changes channels in sequence.
You will see all the channels that the TV has memorized (The TV must have memorized at least three channels). You will not see channels that were either erased or not memorized. See page 16 to memorize channels.





Using the Number Buttons

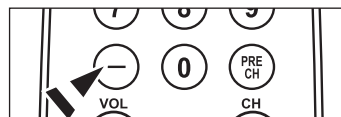
1. Press the number buttons to go directly to a channel. For example, to select channel 27, press 2, then 7.
➤ For quick channel change, press the number buttons, then press the **ENTER** button.



Using the Button

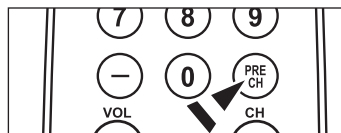
The  button is used to select stations that broadcast a digital signal.

1. For example, for Channel 7-1, press 7, then , then 1.
 - > HD indicates the TV is receiving a Digital High Definition signal. SD indicates the TV is receiving a Standard Definition signal.
 - > For quick channel change, press the number buttons, then press the **ENTER**  button.



Using the PRE CH Button to select the Previous Channel

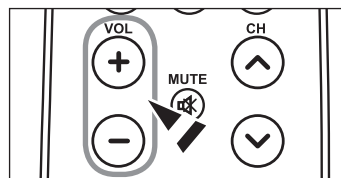
1. Press the **PRE CH** button.
The TV will switch to the last channel viewed.
 - > To quickly switch between two channels that are far apart, tune to one channel, then use the number button to select the second channel. Then use the **PRE CH** button to quickly alternate between them.



Adjusting the Volume

Using the Volume Buttons

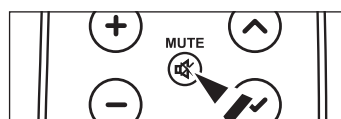
1. Press the **VOL-** or **VOL+** button to increase or decrease the volume.



Using the MUTE button

At any time, you can cut off the sound using the **MUTE** button.

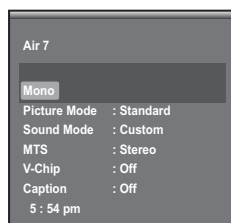
1. Press **MUTE** button and the sound cuts off.
"Mute" is displayed on the screen.
2. To turn mute off, press the **MUTE** button again or simply press the **VOL-** or **VOL+** button.






Viewing the Display

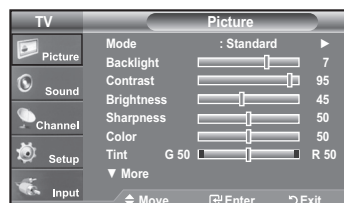
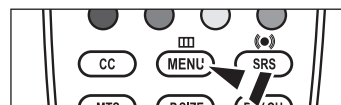
The display identifies the current channel and the status of certain audio-video settings.

1. Press the **INFO** button on the remote control.
The TV will display the channel, the type of sound, and the status of certain picture and sound settings.
 - > Press the **INFO** button once more or wait approximately 10 seconds and the display disappears automatically.



Viewing the Menus

1. With the power on, press the **MENU** button.
The main menu appears on the screen. The menu's left side has icons: Picture, Sound, Channel, Setup, Input.
2. Press the  or  button to select one of the icons.
Then press the **ENTER**  button to access the icon's sub-menu.
3. Press the **EXIT** button to exit.
 - > The on-screen menus disappear from the screen after about one minute.

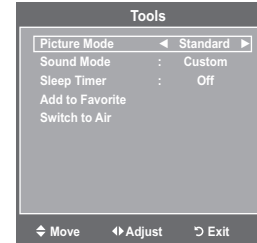


Using the TOOLS Button

You can use the **TOOLS** button to select your frequently used functions quickly and easily. The "Tools" menu changes depending on which external input mode you are viewing.

1. Press the **TOOLS** button.
The "Tools" menu will appear.
2. Press the **▲** or **▼** button to select a menu.
3. Press the **▲/▼/◀/▶/ENTER** buttons to display, change, or use the selected items. For a more detailed description of each function, refer to the corresponding page.

- Picture Mode, see page 19
- Sound Mode, see page 24
- Sleep Timer, see page 39
- Add to Favorite, see page 30
- Switch to Air, see page 16
- Auto Adjustment, see page 35



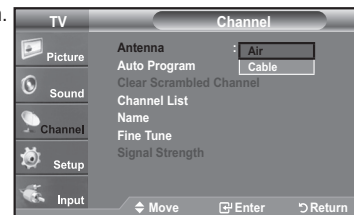
Memorizing the Channels

Your TV can memorize and store all of the available channels for both "off-air" (Air) and "Cable" channels. After the available channels are memorized, use the **CH** button to scan through the channels. This eliminates the need to change channels by entering the channel digits. There are three steps for memorizing channels: selecting a broadcast source, memorizing the channels (automatic) and adding or deleting channels (Channel Lists).

Selecting the Video Signal-source

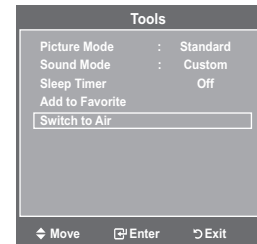
Before your television can begin memorizing the available channels, you must specify the type of signal source that is connected to the TV (i.e. an Air or a Cable system).

1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Channel", then press the **ENTER** button.
2. Press the **ENTER** button to select "Antenna".
Press the **▲** or **▼** button to select "Air" or "Cable", then press the **ENTER** button.
Press the **EXIT** button to exit.






Easy Setting

1. Press the **TOOLS** button on the remote control.
2. Press the **▲** or **▼** button to select "Switch to Air" (or "Switch to Cable"), then press the **ENTER** button.




Storing Channels in Memory (Automatic Method)

1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Channel", then press the **ENTER**  button.
2. Press the **▲** or **▼** button to select "Auto Program", then press the **ENTER**  button.

3. Press the **▲** or **▼** button to select the antenna connection, then press the **ENTER**  button.



- Air: "Air" antenna signal.
- Cable: "Cable" antenna signal.
- Auto: "Air" and "Cable" antenna signals.

4. When selecting the Cable TV system:
Press the **ENTER**  button to start the auto program.

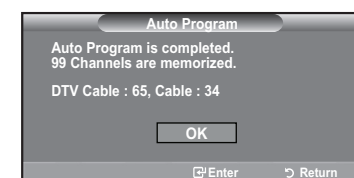
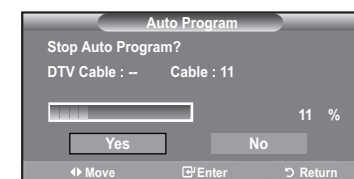
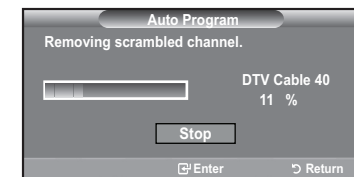
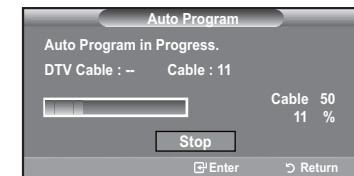
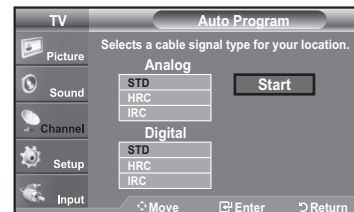
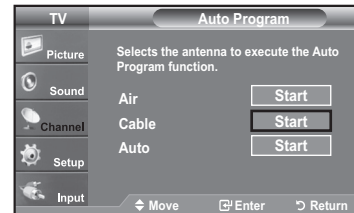
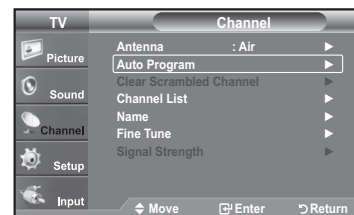
Press the **◀** or **▶** button, then press the **▲** or **▼** to select the correct analog signal cable system source among "STD", "HRC", and "IRC". Press the **ENTER**  button. If you have Digital cable TV, select the cable system signal source for both Analog and Digital.

- STD, HRC and IRC identify various types of cable TV systems. Contact your local cable company to identify the type of cable system that exists in your particular area. At this point the signal source has been selected.

5. The TV begins memorizing all available stations.
After all the available channels are stored, it start to remove scrambled channels(see page 28).

- If you want to stop Auto Programming, press the **ENTER**  button. The "Stop Auto Program?" message will be displayed. Select "Yes" by pressing the **◀** or **▶** button, then press the **ENTER**  button.

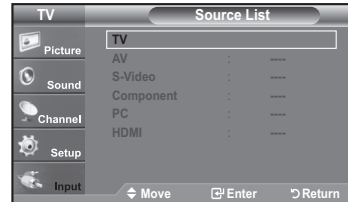
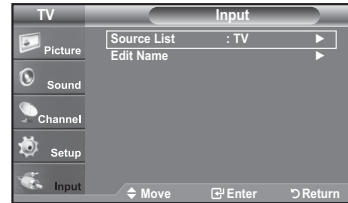
Press the **EXIT** button to exit.



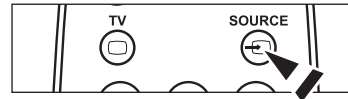
To Select the Source

Use to select TV or other external input sources such as DVD players or Cable Box/ Satellite receivers (Set-Top Box) connected to the TV. Use to select the input source of your choice.

1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Input", then press the **ENTER** button.
2. Press the **ENTER** button to select "Source List".
Press the **▲** or **▼** button to select signal source, then press the **ENTER** button.
 - > Available signal sources: TV, AV, S-Video, Component, PC, HDMI.
 - > You can choose only those external devices that are connected to the TV.



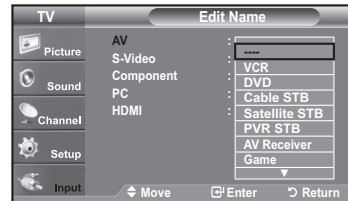
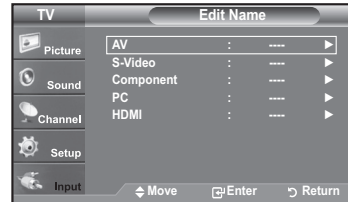
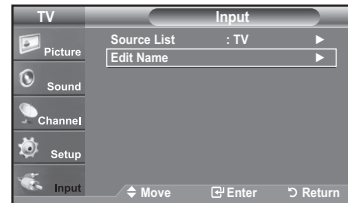
Press the **SOURCE** button on the remote control to view an external signal source.



To Edit the Input Source Name

Name the device connected to the input jacks to make your input source selection easier.

1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Input", then press the **ENTER** button.
Press the **▲** or **▼** button to select "Edit Name", then press the **ENTER** button.
2. Press the **▲** or **▼** button to select "AV", "S-Video", "Component", "PC", "HDMI" input jack, then press the **ENTER** button.
3. Press the **▲** or **▼** button to select "VCR", "DVD", "Cable STB", "Satellite STB", "PVR STB", "AV Receiver", "Game", "Camcorder", "PC", "TV", "IPTV", "Blu-Ray", "HD DVD", "Digital Media Adapter" input source, then press the **ENTER** button.
Press the **EXIT** button to exit.

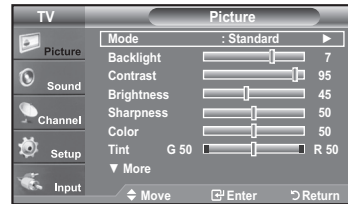


Picture Control

Changing the Picture Standard

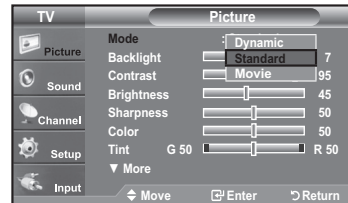
You can activate either Dynamic, Standard, Movie by making a selection from the menu.

1. Press the **MENU** button to display the menu.
Press the **ENTER** button, to select "Picture".



2. Press the **ENTER** button to select "Mode".
Press the **▲** or **▼** button to select the "Dynamic", "Standard" or "Movie".

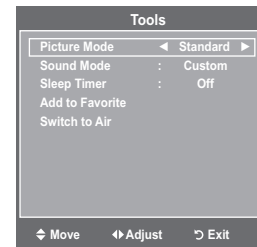
- **Dynamic:** Selects the picture for high-definition in a bright room.
- **Standard:** Selects the picture for the optimum display in a normal environment.
- **Movie:** Selects the picture for viewing movies in a dark room.



3. Press the **EXIT** button to exit.

Easy Setting

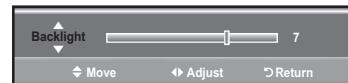
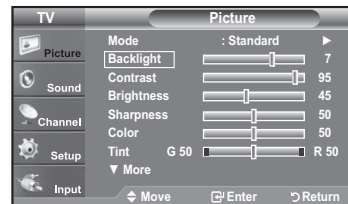
1. Press the **TOOLS** button on the remote control.
2. Press the **▲** or **▼** button to select "Picture Mode".
3. Press the **◀** or **▶** button to select the required option.
4. Press the **EXIT** or **TOOLS** button to exit.



Customizing the Picture Settings

Your television has several setting options that allow you to control the picture quality.

1. To select the desired picture mode, follow the "Changing the Picture Standard" instructions numbers 1 and 2.
2. Press the **▲** or **▼** button to select "Backlight", "Contrast", "Brightness", "Sharpness", "Color" or "Tint", then press the **ENTER** button.
3. Press the **◀** or **▶** button to decrease or increase the value of a particular item.
Press the **ENTER** button.
Press the **EXIT** button to exit.
 - When you make changes to "Backlight", "Contrast", "Brightness", "Sharpness", "Color" or "Tint", the OSD will be adjusted accordingly.
 - In PC mode, you can only make changes to "Backlight", "Contrast" and "Brightness".
 - Settings can be adjusted and stored for each external device you have connected to an input of the TV.

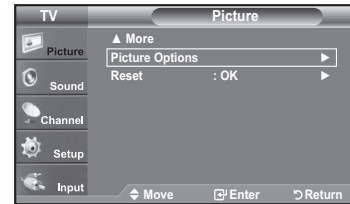


- **Backlight:** Adjusts the brightness of LCD back light.
- **Contrast:** Adjusts the contrast level of the picture.
- **Brightness:** Adjusts the brightness level of the picture.
- **Sharpness:** Adjusts the edge definition of the picture.
- **Color:** Adjusts color saturation of the picture.
- **Tint:** Adjusts the color tint of the picture.

Configuring Picture Options

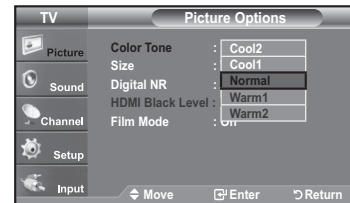
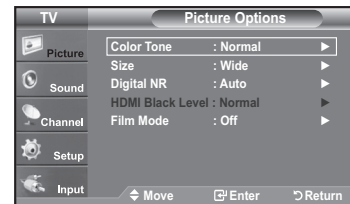
Activating Picture Options

1. Press the **MENU** button to display the menu.
Press the **ENTER** button, to select "Picture".
2. Press the **▲** or **▼** button to select "Picture Options", then press the **ENTER** button.
 - Press the **▲** or **▼** button to select a particular item. Press the **ENTER** button.
 - When you are satisfied with your setting, press the **ENTER** button.
 - In PC mode, you can only make changes to the "Color Tone" and "Size" from among the items in "Picture Options".



Setting the Color Tone

1. Follow the "Activating Picture Options" instructions numbers 1 and 2. (Refer to page 20)
2. Press the **▲** or **▼** button to select "Color Tone", then press the **ENTER** button.
3. Press the **▲** or **▼** button to select "Cool2", "Cool1", "Normal", "Warm1" or "Warm2". Press the **ENTER** button.
 - "Warm1" or "Warm2" is only activated when the picture mode is "Movie".
 - Settings can be adjusted and stored for each external device you have connected to an input of the TV.

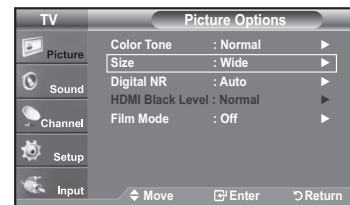


Setting the Screen Size

Occasionally, you may want to change the size of the image on your screen. Your TV comes with six screen size options, each designed to work best with specific types of video input. Your cable box or satellite receiver may have its own set of screen sizes as well. In general, though, you should view the TV in 16:9 mode as much as possible.

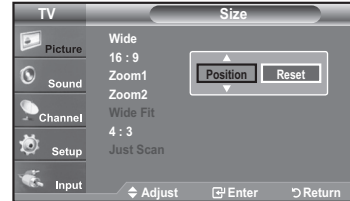
1. Follow the "Activating Picture Options" instructions numbers 1 and 2. (Refer to page 20)
2. Press the **▲** or **▼** button to select "Size", then press the **ENTER** button.
3. Press the **▲** or **▼** button to select the screen format you want. Press the **ENTER** button.
Press the **EXIT** button to exit.

- **Wide:** Adjusts the picture size to Wide appropriate for DVDs or wide broadcasting.
- **16:9:** Sets the picture to 16:9 wide mode.
- **Zoom1:** Magnifies the size of the picture on the screen.
- **Zoom2:** Magnifies the size of the picture more than "Zoom1".
- **Wide Fit:** Enlarges the aspect ratio of the picture to fit the entire screen.
- **4:3:** Sets the picture to 4:3 normal mode.
- **Just Scan:** Use the function to see the full image without any cutoff when HDMI (720p/1080i), Component (1080i) or DTV (1080i) signals are input.

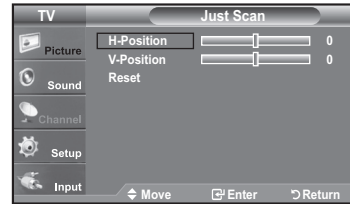


➤ Temporary image retention may occur when viewing a static image on the set for more than two hours.

➤ **After selecting “Zoom1”, “Zoom2” or “Wide Fit”:**
Press the ◀ or ▶ button to select “Position”, then press the **ENTER** button. Press the ▲ or ▼ button to move the picture up and down.
Reset: Press the ◀ or ▶ button to select “Reset”, then press the **ENTER** button. You can initialize the setting.



➤ **After selecting “Just Scan” in HDMI (1080i) or Component (1080i) mode:**
Press the ▲ or ▼ button to select “H-Position” or “V-Position”, then press the **ENTER** button.
Press the ◀ or ▶ button to adjust the screen Position. Press the **ENTER** button.
Reset: Press the ▲ or ▼ button to select “Reset”, then press the **ENTER** button. You can initialize the setting.

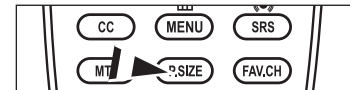


➤ HD (High Definition)
16:9 - 1080i (1920x1080), 720p (1280x720)

➤ Settings can be adjusted and stored for each external device you have connected to an input of the TV.

Input Source	Picture Size
TV, Video, S-Video, Component (480i, 480p)	Wide, 16:9, Zoom1, Zoom2, 4:3
DTV(1080i), Component (1080i), HDMI (720p, 1080i)	Wide, 16:9, 4:3, Wide Fit, Just Scan
PC	Wide, 16:9, 4:3

Alternately, you can press the **P.SIZE** button on the remote control repeatedly to change the picture size.



Wide

Adjusts the picture size to Wide appropriate for DVDs or wide broadcasting.



16:9

Sets the picture to 16:9 wide mode.



Zoom1

Magnifies the size of the picture on the screen.



Zoom2

Magnifies the size of the picture more than “Zoom1”.



Wide Fit

Enlarges the aspect ratio of the picture to fit the entire screen.



4:3

Sets the picture to 4:3 normal mode.



Just Scan

Use the function to see the full image without any cutoff when HDMI (720p/1080i), Component (1080i) or DTV (1080i) signals are input.

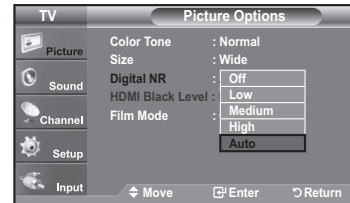
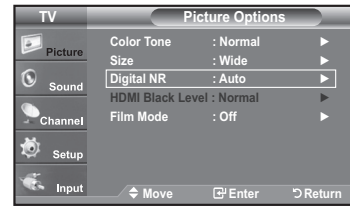
Setting the Digital Noise Reduction

If the broadcast signal received by your TV is weak, you can activate the Digital Noise Reduction feature to help reduce any static and ghosting that may appear on the screen.

1. Follow the "Activating Picture Options" instructions numbers 1 and 2.
(Refer to page 20)
2. Press the ▲ or ▼ button to select "Digital NR", then press the **ENTER** button.
3. Press the ▲ or ▼ button to select "Off", "Low", "Medium", "High" or "Auto".
Press the **ENTER** button.

- **Off:** Turns the screen noise reduction function off.
- **Low:** Reduces screen noise at a low level.
- **Medium:** Reduces screen noise at a medium level.
- **High:** Reduces screen noise at a high level.
- **Auto:** Automatically recognizes and reduces screen noise.

Press the **EXIT** button to exit.



Setting the HDMI Black Level

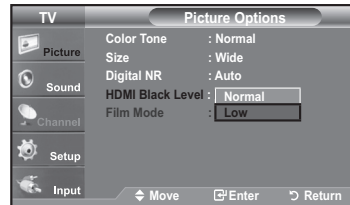
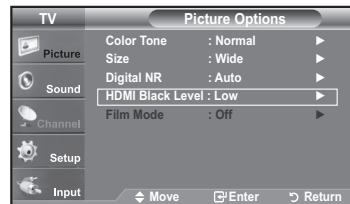
You can select the black level on the screen to adjust the screen depth.

1. Follow the "Activating Picture Options" instructions numbers 1 and 2.
(Refer to page 20)
2. Press the ▲ or ▼ button to select "HDMI Black Level", then press the **ENTER** button.
3. Press the ▲ or ▼ button to select "Normal" or "Low", then press the **ENTER** button.

- **Normal:** The screen gets brighter.
- **Low:** The screen gets darker.

➤ This function is active only when an external device is connected to the TV via HDMI. "HDMI Black Level" function may not be compatible with all external devices.

Press the **EXIT** button to exit.



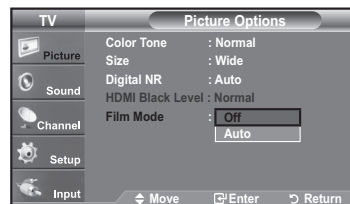
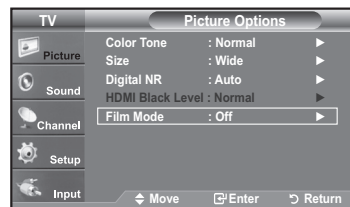
Setting the Film Mode

The TV can be set to automatically sense and process film signals from all sources and adjust the picture for optimum quality.



1. Follow the "Activating Picture Options" instructions numbers 1 and 2.
(Refer to page 20)
2. Press the ▲ or ▼ button to select "Film Mode", then press the **ENTER** button.

3. Press the ▲ or ▼ button to select "Off" or "Auto", then press the **ENTER** button.
Press the **EXIT** button to exit.

➤ "Film mode" is supported in TV, VIDEO, S-VIDEO, COMPONENT(480i / 1080i) and HDMI(480i / 1080i).

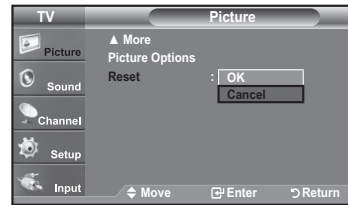


Resetting the Picture Settings to the Factory Defaults

1. Press the **MENU** button to display the menu.
Press the **ENTER** button, to select "Picture".
2. Press the **▲** or **▼** button to select "Reset", then press the **ENTER**  button.
Press the **▲** or **▼** button to select "OK" or "Cancel" then press the **ENTER**  button.

Press the **EXIT** button to exit.


➤ Each mode can be reset.

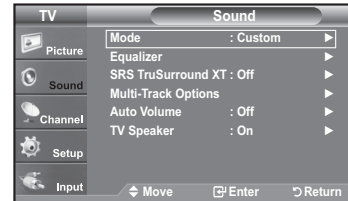




Sound Control

Changing the Sound Standard

You can select the sound mode to best suit the programming you're watching.

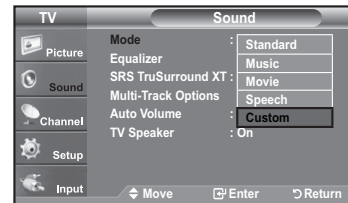
1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Sound", then press the **ENTER**  button.



2. Press the **ENTER**  button to select "Mode".
Press the **▲** or **▼** button to select "Standard", "Music", "Movie", "Speech", or "Custom" sound setting, then press the **ENTER**  button.

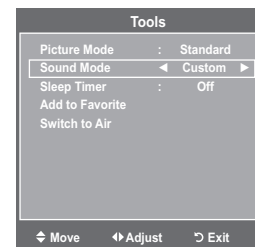
Press the **EXIT** button to exit.

- **Standard**: selects the normal sound mode.
- **Music**: emphasizes music over voices.
- **Movie**: provides the best sound for movies
- **Speech**: emphasizes voice over other sounds.
- **Custom**: recalls your customized sound settings.
(see "Customizing the Sound")





Easy Setting

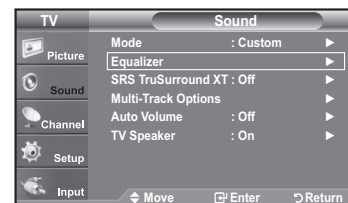
1. Press the **TOOLS** button on the remote control.
2. Press the **▲** or **▼** button to select "Sound Mode".
3. Press the **◀** or **▶** button to select the required option.
4. Press the **EXIT** or **TOOLS** button to exit.




Customizing the Sound

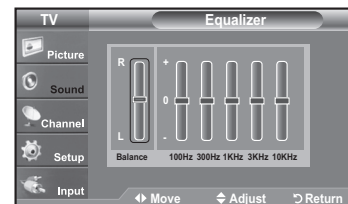
The sound settings can be adjusted to suit your personal preference.

1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Sound", then press the **ENTER**  button.
2. Press the **▲** or **▼** button to select "Equalizer", then press the **ENTER**  button.



3. Press the **◀** or **▶** button to select a particular frequency to adjust.
Press the **▲** or **▼** button to increase or decrease the level of the particular frequency.
Press the **ENTER**  button.

Press the **EXIT** button to exit.






- **L/R Sound Balance Adjustment**: To adjust the sound balance of the L/R speakers.
- **Bandwidth Adjustment (100Hz, 300Hz, 1KHz, 3KHz, 10KHz)**: To adjust the level of different bandwidth frequencies.


➤ If you make any changes to the "Equalizer" settings, the sound mode is automatically switched to the "Custom" mode.


Setting the TruSurround XT

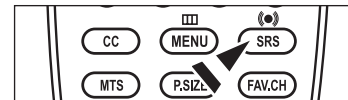
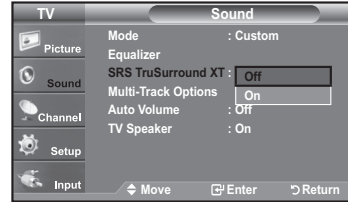
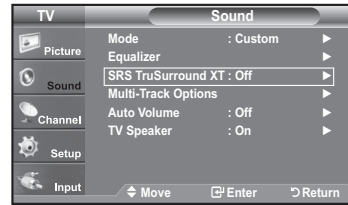
TruSurround XT is a patented SRS technology that solves the problem of playing 5.1 multichannel content over two speakers. TruSurround delivers a compelling, virtual surround sound experience through any two-speaker playback system, including internal television speakers. It is fully compatible with all multichannel formats.

1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Sound", then press the **ENTER**  button.
2. Press the **▲** or **▼** button to select "SRS TruSurround XT", then press the **ENTER**  button.
3. Press the **▲** or **▼** button to select "Off" or "On", then press the **ENTER**  button.
Press the **EXIT** button to exit.



TruSurround XT, SRS and  Symbol are trademarks of SRS Labs, Inc.
TruSurround XT technology is incorporated under license from SRS Labs, Inc.

-  Press the **SRS** button on the remote control to select "Off" or "On".







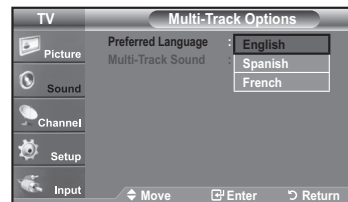
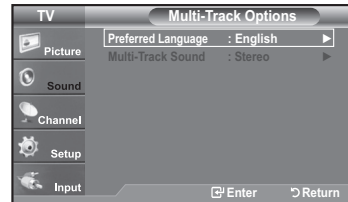
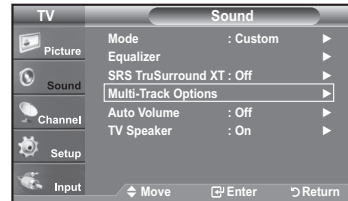
Choosing a Multi-Channel Sound (MTS) track - Digital


The digital-TV transmission system is capable of simultaneous transmission of many audio tracks (for example, simultaneous translations of the program into foreign languages). The availability of these additional "multitracks" depends upon the program.

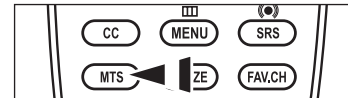
> "Multi-Track Options" is available only in TV mode.

Preferred Language

1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Sound", then press the **ENTER**  button.
> Quick way to access the MTS menu: Just press the "MTS" button on the remote control. You can listen in a language other than your chosen language by pressing the MTS button.
2. Press the **▲** or **▼** button to select "Multi-Track Options", then press the **ENTER**  button.
3. Press the **ENTER**  button to select "Preferred Language".
Press the **▲** or **▼** button to choose the language (English, Spanish or French) you want, then press the **ENTER**  button.
Press the **EXIT** button to exit.
> "Preferred Language" is available only in Digital TV mode.
> You can only select the language from among the actual languages being broadcast.







-  You can listen in a language other than the Preferred language by pressing the **MTS** button on the remote control.




Choosing a Multi-Channel Sound (MTS) track - Analog

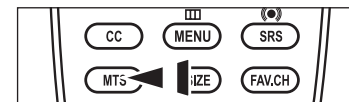
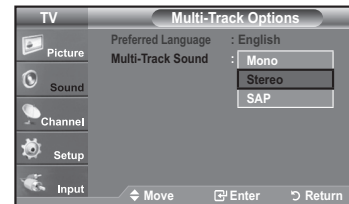
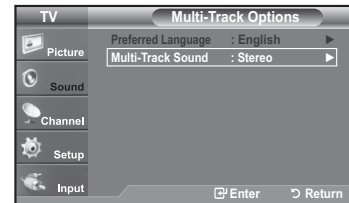
Multi-Track Sound

1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Sound", then press the **ENTER**  button.
2. Press the **▲** or **▼** button to select "Multi-Track Options", then press the **ENTER**  button.
3. Press the **▲** or **▼** button to select "Multi-Track Sound", then press the **ENTER**  button.
Press the **▲** or **▼** button to select a setting you want, then press the **ENTER**  button.
Press the **EXIT** button to exit.

- **Mono**: Choose for channels that are broadcasting in mono or if you are having difficulty receiving a stereo signal.
- **Stereo**: Choose for channels that are broadcasting in stereo.
- **SAP**: Choose to listen to the Separate Audio Program, which is usually a foreign-language translation.




- > "Multi-Track Sound" is available only in Analog TV mode.
- > Depending on the particular program being broadcast, you can listen to "Mono", "Stereo" or "SAP".

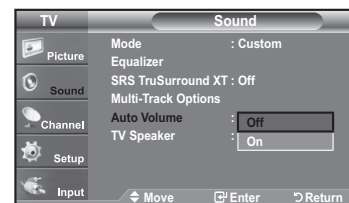
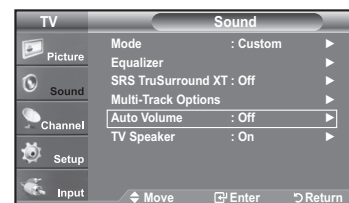
-  Press the **MTS** buttons on the remote control repeatedly to select "Mono", "Stereo" or "SAP".



Automatic Volume Control



Reduces the differences in volume level among broadcasters.

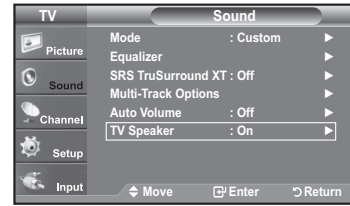
1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Sound", then press the **ENTER**  button.
2. Press the **▲** or **▼** button to select "Auto Volume", then press the **ENTER**  button.
3. Press the **▲** or **▼** button to set Auto Volume "Off" or "On" then press the **ENTER**  button.
Press the **EXIT** button to exit.




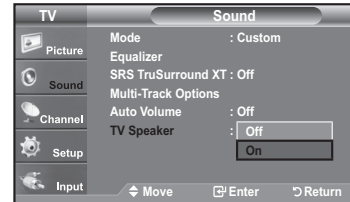
Setting the TV Speakers On/Off

Sound output from the TV speakers is muted.

1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Sound", then press the **ENTER**  button.
2. Press the **▲** or **▼** button to select "TV Speaker", then press the **ENTER**  button.



3. Press the **▲** or **▼** button to select "Off", then press the **ENTER**  button.
Press the **EXIT** button to exit.
 - > When "TV Speaker" is set to "Off", Sound menus except "Multi-Track Options" cannot be adjusted.
 - > The **VOL+**, **VOL-** and **MUTE** buttons do not operate when the "TV Speaker" is set to "Off".



	TV's Internal Speakers			Audio Out (Optical, L/R Out) to Sound System		
	RF	AV, S-Video	Component, PC, HDMI	RF	AV, S-Video	Component, PC, HDMI
TV Speaker On	Speaker Output	Speaker Output	Speaker Output	Sound Output	Sound Output	Sound Output
TV Speaker Off	Mute	Mute	Mute	Sound Output	Sound Output	Sound Output
Video No Signal	Mute	Mute	Mute	Mute	Mute	Mute



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Connecting Headphones (Sold separately)

You can connect a set of headphones to your set if you wish to watch a TV program without disturbing other people in the room.






- > When you insert the headphone's plug into the headphone jack, you cannot operate "TV Speaker" in Sound menu.
- > Prolonged use of headphones at a high volume may damage your hearing.
- > You will not hear sound from the speakers when you connect headphones to the TV.

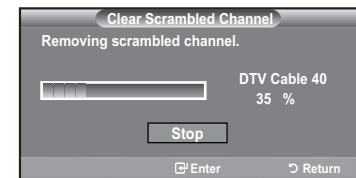
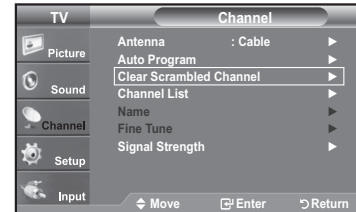


Channel Control

Clearing Scrambled Channels - Digital



The Clear Scrambled Channel function is used to filter out scrambled channels after Auto Program is completed. This process may take up to 20~30 minutes.

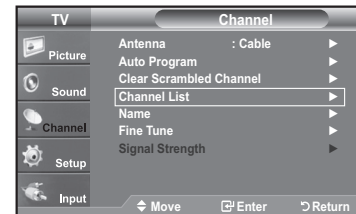
1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Channel", then press the **ENTER**  button.
2. Press the **▲** or **▼** button to select "Clear Scrambled Channel", then press the **ENTER**  button.
It searches scrambled channels, which are to be removed from the list.
 - **To stop searching scrambled channels:**
Press the **ENTER**  button to select Stop.
Press the **◀** button to select "Yes", then press the **ENTER**  button.
3. When the scrambled channel searching is completed, press the **ENTER**  button.
Press the **EXIT** button to exit.
 - This function is only available in "Cable" mode.



Adding and Erasing Channels


Using this menu, you can Add/Delete or set Favorite channels and use the program guide for digital broadcasts. To use the Channel List function, first run "Auto Program" (see page 17).


1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Channel", then press the **ENTER**  button.
2. Press the **▲** or **▼** button to select "Channel List", then press the **ENTER**  button.



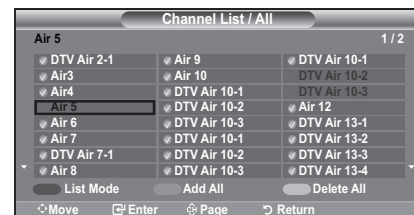
3. Press the **ENTER**  button to select "All".





4. Press the **◀**, **▶**, **▲** or **▼** button to select a channel to delete, then press the **ENTER**  button.

Press the **▲** or **▼** button to select "Delete", then press the **ENTER**  button to delete the channel.

The  mark will disappear.



5. Press the **◀**, **▶**, **▲** or **▼** button to select a channel to add, then press the **ENTER**  button.

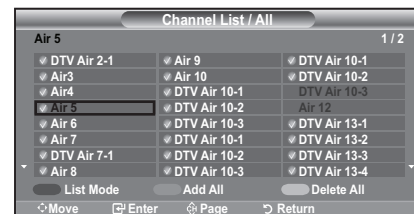
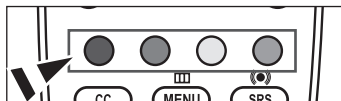
Press the **▲** or **▼** button to select "Add", then press the **ENTER**  button to add the channel.

The  mark will appear and the channel will be added.

Press the **EXIT** button to exit.



➤ All selected channels will be shown on "Added" menu.

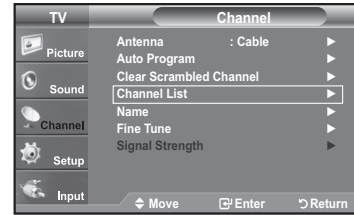
- **Red button:** Press repeatedly to select "All", "Added" or "Favorite".
- **Green button:** Press to add all deleted channels.
- **Yellow button:** Press to delete all memorized channels.




To Set-Up Your Favorite Channels


You can set channels you watch frequently as favorites.


1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Channel", then press the **ENTER**  button.
2. Press the **▲** or **▼** button to select "Channel List", then press the **ENTER**  button.




3. Press the **▲** or **▼** button to select "All" or "Added", then press the **ENTER**  button.



4. Press the **◀**, **▶**, **▲** or **▼** button to select your favorite channels to watch among the labeled channels. Then press the **ENTER**  button.


Press the **▲** or **▼** button to select "Favorite", then press the **ENTER**  button.

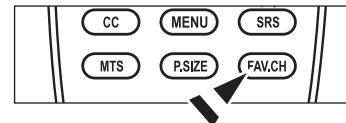
The "♥" symbol will be highlighted and the channel will be set as a Favorite.
To cancel your Favorite channel selection, press the **ENTER**  button until the "♥" symbol is no longer highlighted.

Press the **EXIT** button to exit.


- Only memorized channels can be set as favorite channels.
- All favorite channels will be shown in the "Favorite" menu.

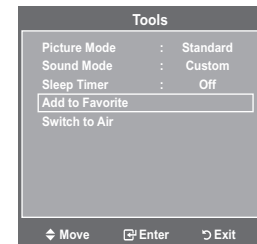


-  To select the favorite channels you have set up, press the **FAV.CH** button on the remote control.







Easy Setting

1. Press the **TOOLS** button on the remote control.
2. Press the **▲** or **▼** button to select "Add to Favorite" (or "Delete from Favorite"), then press the **ENTER**  button.
 - The current channel is added to (or deleted from) Favorites.

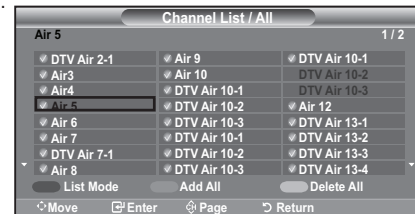
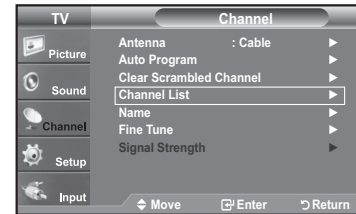


Viewing the Channel Lists

You can display a list of all channels, added channels or your favorite channels.



1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Channel", then press the **ENTER**  button.
2. Press the **▲** or **▼** button to select "Channel List", then press the **ENTER**  button.
3. Press the **▲** or **▼** button to select "All", "Added" or "Favorite", then press the **ENTER**  button.
4. Press the **▲** or **▼** button to select "Channel", then press the **ENTER**  button.
To toggle between your all channels, add channels or favorite channels, use the Red button on the remote control.

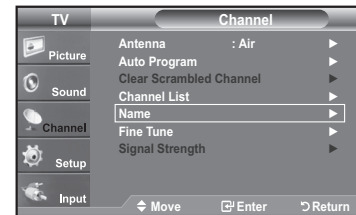
- **Red button:** Press repeatedly to select "All", "Added" or "Favorite"






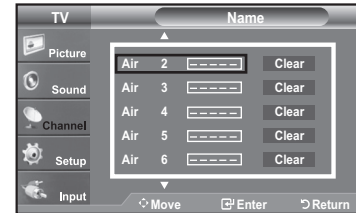
Labeling Channels

Channels can be labeled so that their call letters appear whenever the channel is selected.

1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Channel", then press the **ENTER**  button.
Press the **▲** or **▼** button to select "Name", then press the **ENTER**  button.

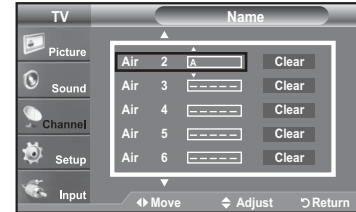


2. Press the **▲** or **▼** button to select the channel to be assigned a new name, then press the **ENTER**  button.
Press the **▲** or **▼** button to select a letter, a number or a blank (Results in this sequence: A...Z, 0...9, +, -, *, /, blank).
Press the **▶** button to switch to the next field, which will be selected.
Select a second letter or digit by pressing the **▲** or **▼** button, as above.
Repeat the process to select the last three digits. When you have finished, press the **ENTER**  button to assign the new name.
To erase the assigned new name, select "Clear" by pressing the **◀** or **▶** button, then press the **ENTER**  button.







Press the **EXIT** button to exit.

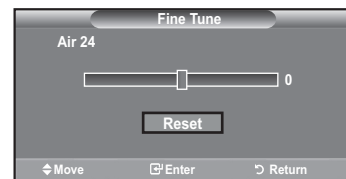
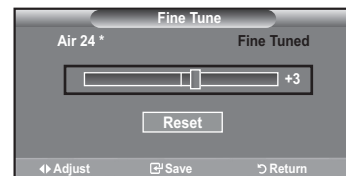
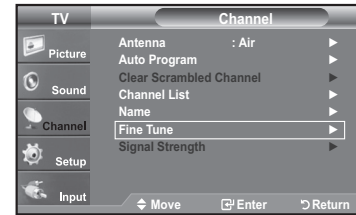
- The names of digital broadcasting channels are automatically assigned and cannot be labelled.



Fine Tuning Analog Channels



Use fine tuning to manually adjust a particular channel for optimal reception.

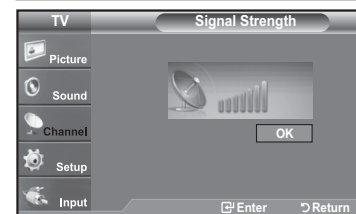
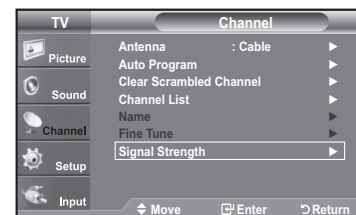
1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Channel", then press the **ENTER**  button.
2. Press the **▲** or **▼** button to select "Fine Tune", then press the **ENTER**  button.
3. Press the **◀** or **▶** button to adjust the fine tuning.
To store the fine tuning setting in the TV's memory, press the **ENTER**  button.
➤ If you do not store the fine-tuned channel in memory, adjustments are not saved.
4. To reset the fine tuning setting, press the **▼** button to select "Reset", then press the **ENTER**  button.
Press the **EXIT** button to exit.
➤ "*" will appear next to the name of fine-tuned channels.
➤ Only analog TV channels can be fine tuned.



Checking the Digital-Signal Strength

Unlike analog channels, which can vary in reception quality from "snowy" to clear, digital (HDTV) channels have either perfect reception quality or you will not receive them at all. So, unlike analog channels, you cannot fine tune a digital channel. You can, however, adjust your antenna to improve the reception of available digital channels.

1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Channel", then press the **ENTER**  button.
2. Press the **▲** or **▼** button to select "Signal Strength", then press the **ENTER**  button.
If the signal strength meter indicates that the signal is weak, physically adjust your antenna to increase the signal strength.
Continue to adjust the antenna until you find the best position with the strongest signal.
Press the **EXIT** button to exit.



PC Display

Using Your TV as a Computer (PC) Display

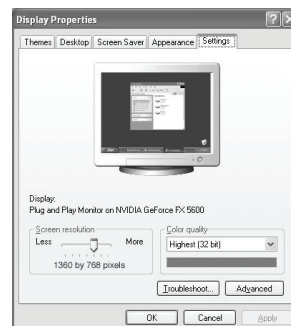
Setting Up Your PC Software (Based on Windows XP)

The Windows display-settings for a typical computer are shown below. The actual screens on your PC will probably be different, depending upon your particular version of Windows and your particular video card. However, even if your actual screens look different, the same basic set-up information will apply in almost all cases. (If not, contact your computer manufacturer or Samsung Dealer.)

1. First, click on "Control Panel" on the Windows start menu.
2. When the control panel window appears, click on "Appearance and Themes" and a display dialog-box will appear.
3. When the control panel window appears, click on "Display" and a display dialog-box will appear.
4. Navigate to the "Settings" tab on the display dialog-box.

The correct size setting (resolution)
Optimum: LN19A450C1D, LN19A451C1D-1440 X 900 pixels
LN22A450C1D, LN22A451C1D-1680 X 1050 pixels

If a vertical-frequency option exists on your display settings dialog box, the correct value is "60" or "60 Hz". Otherwise, just click "OK" and exit the dialog box.



Display Modes

If the signal from the system equals the standard signal mode, the screen is adjusted automatically. If the signal from the system doesn't equal the standard signal mode, adjust the mode by referring to your videocard user guide; otherwise there may be no video. For the display modes listed below, the screen image has been optimized during manufacturing.

D-Sub Input

Mode	Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock Frequency (MHz)	Sync Polarity (H/V)
IBM	640 x 350	31.469	70.086	25.175	+/-
	720 x 400	31.469	70.087	28.322	-/+
VESA	640 x 480	31.469	59.940	25.175	-/-
	640 x 480	37.861	72.809	31.500	-/-
	640 x 480	37.500	75.000	31.500	-/-
	800 x 600	37.879	60.317	40.000	+/+
	800 x 600	48.077	72.188	50.000	+/+
	800 x 600	46.875	75.000	49.500	+/+
	1024 x 768	48.363	60.004	65.000	-/-
	1024 x 768	56.476	70.069	75.000	-/-
	1024 x 768	60.023	75.029	78.750	+/+
	1280 x 1024	63.981	60.020	108.000	+/+
VESA (only LN19A450C1D, LN19A451C1D model)	1280 x 1024	79.976	75.025	135.000	+/+
	1360 x 768	47.712	60.015	85.500	+/+
VESA (only LN19A450C1D, LN19A451C1D model)	1440 x 900	55.935	59.887	106.500	-/+
	1440 x 900	70.635	74.984	136.750	-/+
VESA (only LN22A450C1D, LN22A451C1D model)	1680 x 1050RB	64.674	59.883	119.000	+/-


HDMI/DVI Input

Mode	Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock Frequency (MHz)	Sync Polarity (H/V)
VESA	640 x 480	31.469	59.940	25.175	-/-
	800 x 600	37.879	60.317	40.000	+/+
	1024 x 768	48.363	60.004	65.000	-/-
	1280 x 1024	63.981	60.020	108.000	+/+
	1360 x 768	47.712	60.015	85.500	+/+
VESA (only LN19A450C1D, LN19A451C1D model)	1440 x 900	55.935	59.887	106.500	-/+
VESA (only LN22A450C1D, LN22A451C1D model)	1680 x 1050RB	64.674	59.883	119.000	+/-

Setting up the TV with your PC


How to Auto Adjust

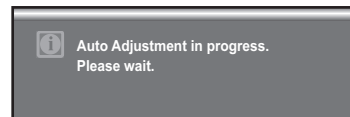
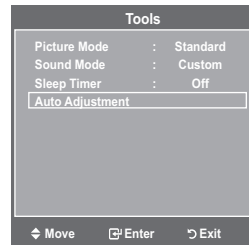
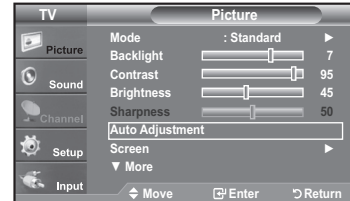
Use the Auto Adjust function to have the TV set automatically adjust the video signals it receives. The function also automatically fine-tunes the settings and adjusts the frequency values and positions.

- This function does not work in DVI-Digital mode.
 - Preset: Press the **SOURCE** button to select PC mode.
1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Picture", then press the **ENTER**  button.

2. Press the **▲** or **▼** button to select "Auto Adjustment", then press the **ENTER**  button.
Press the **EXIT** button to exit.





Easy Setting

1. Press the **TOOLS** button on the remote control.
2. Press the **▲** or **▼** button to select "Auto Adjustment", then press the **ENTER**  button.



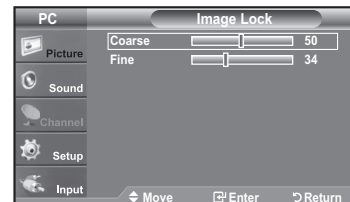
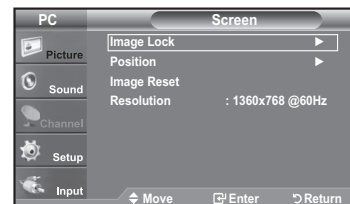
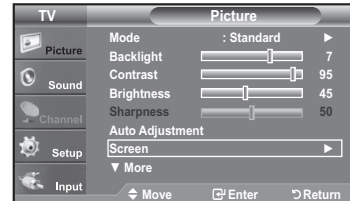
Adjusting the Screen Quality

The purpose of the picture quality adjustment is to remove or reduce picture noise. If the noise is not removed by fine tuning alone, then make the vertical frequency adjustments on your PC and fine tune again. After the noise has been reduced, re-adjust the picture so that it is aligned on the center of the screen.

- Preset: Press the **SOURCE** button to select PC mode.
1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Picture", then press the **ENTER**  button.
Press the **▲** or **▼** button to select "Screen", then press the **ENTER**  button.
 2. Press the **ENTER**  button to select "Image Lock".
 3. Press the **▲** or **▼** button to select "Coarse" or "Fine", then press the **ENTER**  button.
Press the **◀** or **▶** button to adjust the screen quality.
➤ Vertical stripes may appear or the picture may be blurry.





Press the **ENTER**  button.

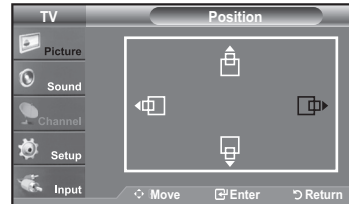
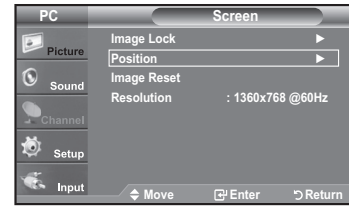
Press the **EXIT** button to exit.



Changing the Screen Position




Adjust the PC's screen positioning if it does not fit the TV screen.

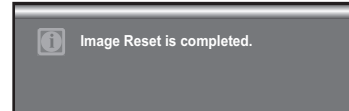
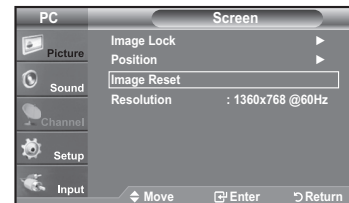
- Preset: Press the **SOURCE** button to select PC mode.
1. Press the **MENU** button to display the menu.
Press the ▲ or ▼ button to select "Picture", then press the **ENTER**  button.
Press the ▲ or ▼ button to select "Screen", then press the **ENTER**  button.
 2. Press the ▲ or ▼ button to select "Position", then press the **ENTER**  button.
 3. Press the ▲ or ▼ button to adjust the V-Position.
Press the ◀ or ▶ button to adjust the H-Position.
Press the **ENTER**  button.
Press the **EXIT** button to exit.



Initializing the Screen Position. Coarse and Fine

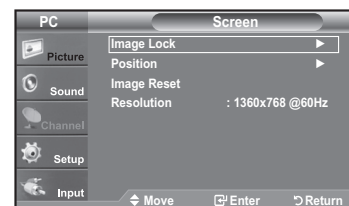
You can replace all image settings with the factory default values.

- Preset: Press the **SOURCE** button to select PC mode.
1. Press the **MENU** button to display the menu.
Press the ▲ or ▼ button to select "Picture", then press the **ENTER**  button.
Press the ▲ or ▼ button to select "Screen", then press the **ENTER**  button.
 2. Press the ▲ or ▼ button to select "Image Reset", then press the **ENTER**  button.
Press the **EXIT** button to exit.



Viewing the Resolution

You can confirm the resolution configured for the PC.










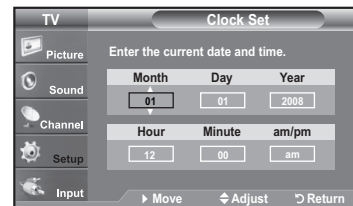
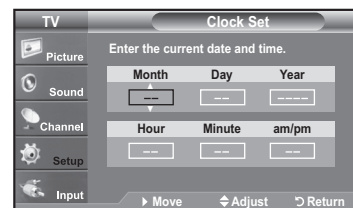
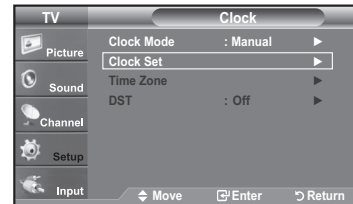
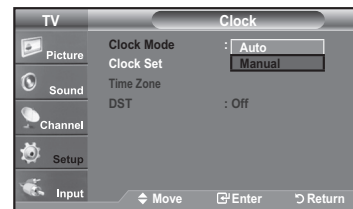
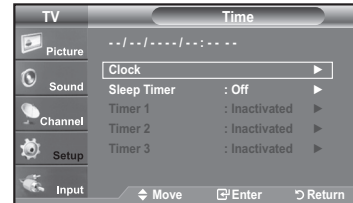
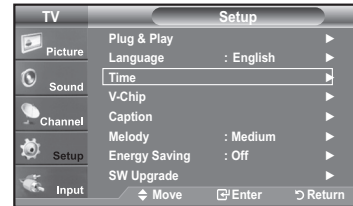
Time Setting

Setting the Clock

Setting the clock is necessary in order to use the various timer features of the TV. Also, you can check the time while watching the TV. (Just press the **INFO** button.)

Option 1: Setting the Clock Manually

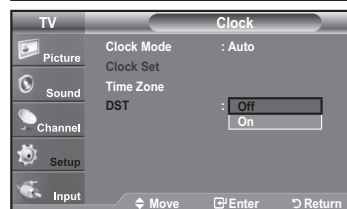
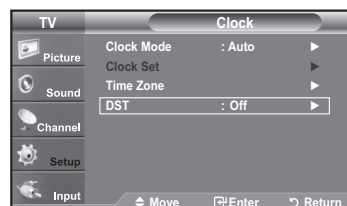
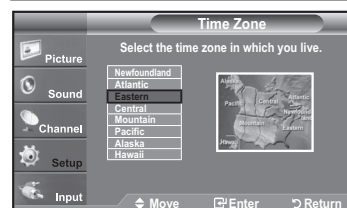
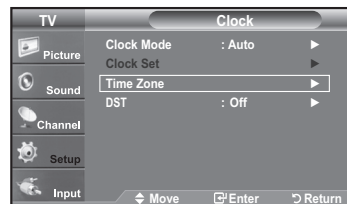
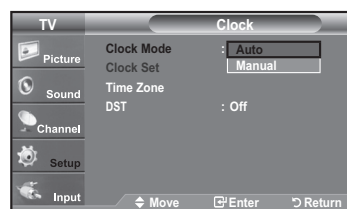
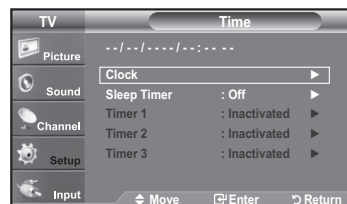
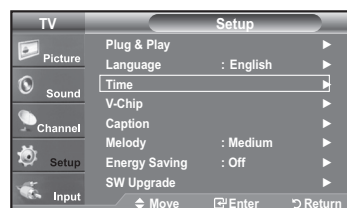
1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Setup", then press the **ENTER**  button.
Press the **▲** or **▼** button to select "Time", then press the **ENTER**  button.
2. Press the **ENTER**  button to select "Clock".
3. Press the **ENTER**  button to select "Clock Mode".
Press the **▲** or **▼** button to select "Manual", then press the **ENTER**  button.
4. Press the **▲** or **▼** button to select "Clock Set", then press the **ENTER**  button.
5. Press the **◀** or **▶** button to move to "Month", "Day", "Year", "Hour", "Minute", or "am/pm". Set the date and time you want by pressing the **▲** or **▼** button, then press the **ENTER**  button.
Press the **EXIT** button to exit.
 - > The current time will appear every time you press the **INFO** button.
 - > You can set the month, day, year, hour and minute directly by pressing the number buttons on the remote control.



Option 2: Setting the Clock Automatically






The Clock can be set automatically if you are receiving a digital signal.

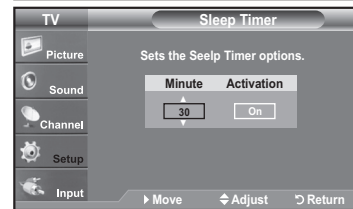
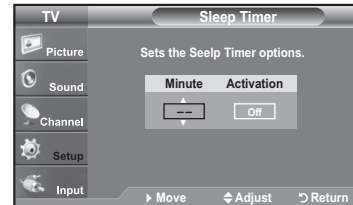
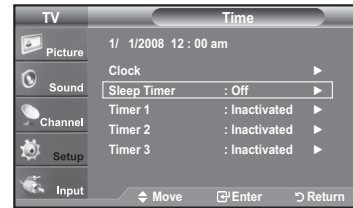
1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Setup", then press the **ENTER** button.
Press the **▲** or **▼** button to select "Time", then press the **ENTER** button.
2. Press the **ENTER** button to select "Clock".
3. Press the **ENTER** button to select "Clock Mode".
Press the **▲** or **▼** button to select "Auto", then press the **ENTER** button.
4. Press the **▲** or **▼** button to select "Time Zone", then press the **ENTER** button.
5. Press the **▲** or **▼** button to highlight the time zone for your local area,
then press the **ENTER** button.
6. Press the **▲** or **▼** button to select "DST", then press the **ENTER** button.
Press the **▲** or **▼** button to select "Off" or "On", then press the **ENTER** button.
Press the **EXIT** button to exit.
 - Depending on the broadcast station and signal, the auto time may not be set correctly. If this occurs, set the time manually.
 - The Antenna or cable must be connected in order to set the time automatically.



Setting the Sleep Timer

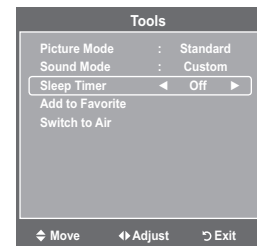
The sleep timer automatically shuts off the TV after a preset time (30, 60, 90, 120, 150 and 180 minutes).

1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Setup", then press the **ENTER**  button.
Press the **▲** or **▼** button to select "Time", then press the **ENTER**  button.
2. Press the **▲** or **▼** button to select "Sleep Timer", then press the **ENTER**  button.
3. Press the **▲** or **▼** button to adjust "Minute", then press the **ENTER**  button.
 - Setting the Timer sets the "Activation" to "On" automatically.
 - **To cancel the set sleep timer :**
Press the **◀** or **▶** button to select "Activation".
Press the **▲** or **▼** button to select "Off", then press the **ENTER**  button.Press the **EXIT** button to exit.







Easy Setting

1. Press the **TOOLS** button on the remote control.
2. Press the **▲** or **▼** button to select "Sleep Timer".
3. Press the **◀** or **▶** button to select the minute.
4. Press the **EXIT** or **TOOLS** button to exit.



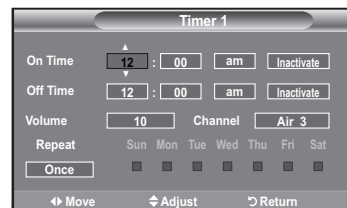
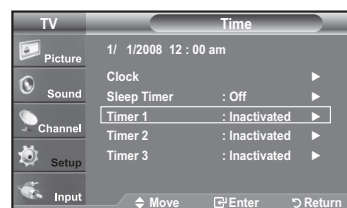
Setting the On/Off Timer

1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Setup", then press the **ENTER**  button.
Press the **▲** or **▼** button to select "Time", then press the **ENTER**  button.
2. Three different On/Off Timer Settings can be made. Press the **▲** or **▼** button to select "Timer 1", "Timer 2" or "Timer 3", then press the **ENTER**  button.
3. Press the **◀** or **▶** button to select the desired item below.
Press the **▲** or **▼** button to adjust the setting.

- **On Time:** Set the Hour, Minute, am/pm, and Activation/Inactivation.
(To activate timer with the setting you've chosen, set to "Activate".)
- **Off Time:** Set the Hour, Minute, am/pm, and Activation/Inactivation.
(To activate timer with the setting you've chosen, set to "Activate".)
- **Volume:** Set the required volume level.
- **Channel:** Select the desired channel.
- **Repeat:** Select "Once", "Everyday", "Mon~Fri", "Mon~Sat", "Sat~Sun", or "Manual".
 - When "Manual" is selected, press the **▶** button to select the desired day of the week. Press the **ENTER**  button over the desired day and the **✓** mark will appear.




Press the **EXIT** button to exit.

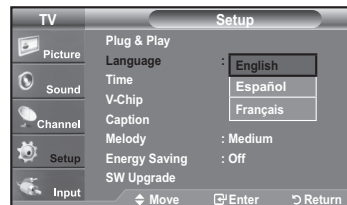
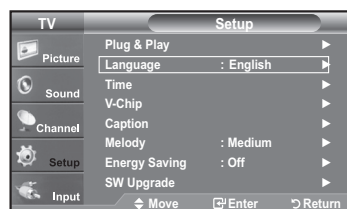
- You can set the hour, minute and channel by pressing the number buttons on the remote control.
- **Auto Power Off**
When you set the timer On, the television will eventually turn off, if no controls are operated for 3 hours after the TV was turned on by the timer. This function is only available in timer On mode and prevents overheating, which may occur if a TV is on for too long time.



Function Description

Selecting a Menu Language

1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Setup", then press the **ENTER**  button.
Press the **▲** or **▼** button to select "Language", then press the **ENTER**  button.
2. Press the **▲** or **▼** button to select "English", "Español" or "Français".
Press the **ENTER**  button.
Press the **EXIT** button to exit.



Using the V-Chip




The V-Chip feature automatically locks out programs that are deemed inappropriate for children. The user must enter a PIN (personal ID number) before any of the V-Chip restrictions are set up or changed.

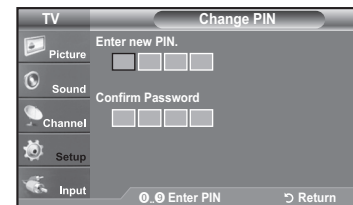
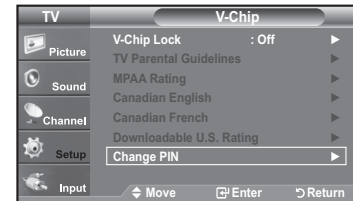
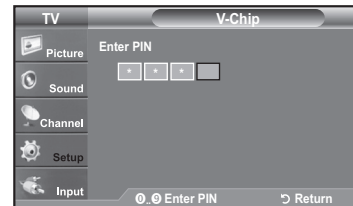
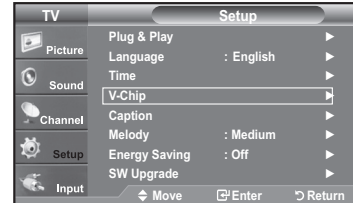
- "V-Chip" function is not available in HDMI, component or PC mode.
- The Screen Saver is activated if there is no remote control key input for longer than 1 minute while setting up the "V-Chip".

U.S.A Only




This product is covered by the following U.S.patents : US4,930,158,US4,930,160

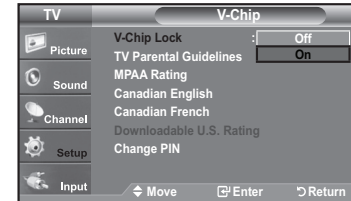
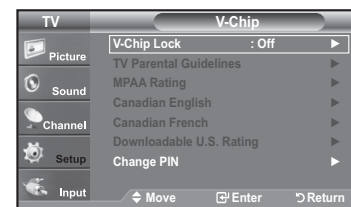
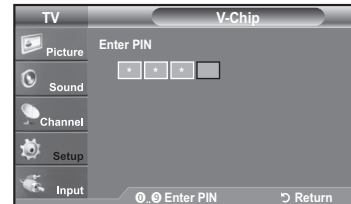
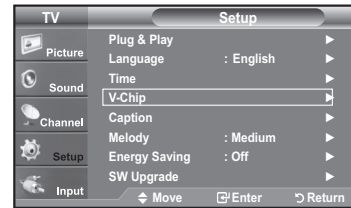
Setting Up Your Personal ID Number (PIN)

1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Setup", then press the **ENTER**  button.
2. Press the **▲** or **▼** button to select "V-Chip", then press the **ENTER**  button.
The message "Enter PIN" will appear. Enter your 4 digit PIN number.
 - The default PIN number of a new TV set is "0-0-0-0".
3. The "V-Chip" screen will appear.
Press the **▲** or **▼** button to select "Change PIN", then press the **ENTER**  button.
The Change PIN screen will appear. Choose any 4 digits for your PIN and enter them. As soon as the 4 digits are entered, the "Confirm Password" screen appears. Re-enter the same 4 digits. When the Confirm screen disappears, your PIN has been memorized.
Press the **EXIT** button to exit.
 - If you forget the PIN, press the remote-control buttons in the following sequence, which resets the pin to 0-0-0-0 : Power Off. → Mute → 8 → 2 → 4 → Power On.





How to Enable/Disable the V-Chip

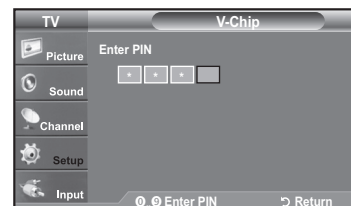
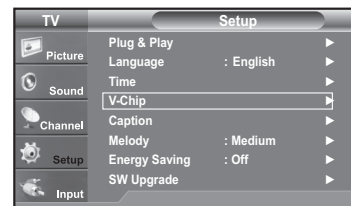
1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Setup", then press the **ENTER**  button.
2. Press the **▲** or **▼** button to select "V-Chip", then press the **ENTER**  button.
The message "Enter PIN" will appear. Enter your 4 digit PIN number.
3. The "V-Chip" screen will appear.
To enable the V-Chip feature, press the **ENTER**  button so that the "V-Chip Lock" field is "On". (Pressing the **▲** or **▼** button will alternate between "On" and "Off".)
Press the **ENTER** button.
Press the **EXIT** button to exit.




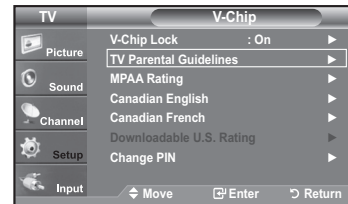
How to Set up Restrictions Using the "TV Parental Guidelines"

First, set up a personal identification number (PIN) and enable the V-Chip. (See previous section.)
Parental restrictions can be set up using either of two methods: The TV guidelines or the MPAA rating.

1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Setup", then press the **ENTER**  button.
2. Press the **▲** or **▼** button to select "V-Chip", then press the **ENTER**  button.
The message "Enter PIN" will appear. Enter your 4 digit PIN number.

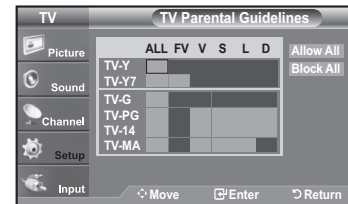




- The "V-Chip" screen will appear. Press the ▲ or ▼ button to select "TV Parental Guidelines", then press the **ENTER**  button.

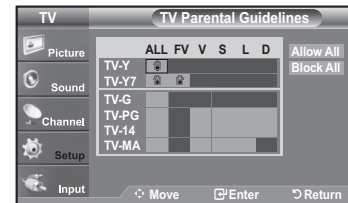


- The "TV Parental Guidelines" screen will appear. Press the ▲ or ▼ button to select one of the six aged based categories:

- **TV-Y:** Young children
- **TV-Y7:** Children 7 and over
- **TV-G:** General audience
- **TV-PG:** Parental guidance
- **TV-14:** Viewers 14 and over
- **TV-MA:** Mature audience



- At this point, one of the TV-Ratings is selected. Press the **ENTER**  button. Depending on your existing setup, the "🔒" symbol will be selected. (Blank = Unblocked, 🔒 = Blocked) While "🔒" is selected, press the **ENTER**  button to block or unblock the category. To select a different TV-Rating, press the ▲ or ▼ button and then repeat the process.





➤ Allow all: Press to unlock all TV ratings. / Block all: Press to lock all TV ratings.

➤ The TV-Y, TV-Y7, TV-G, TV-PG, TV-14 and TV-MA have additional options. See the next step to change any of the following sub-ratings:

FV: Fantasy violence / D: Sexually Suggestive Dialog / L: Adult Language / S: Sexual situation / V: Violence

➤ The V-Chip will automatically block certain categories that are "more restrictive". For example, if you block "TV-Y" category, then TV-Y7 will automatically be blocked. Similarly, if you block the TV-G category, then all the categories in the "young adult" group will be blocked (TV-G, TV-PG, TV-14 and TV-MA). The sub-ratings (D, L, S, V) work together similarly.(See next section.)

- How to set the FV, D, L, S and V sub-ratings. First, select one of these TV-Ratings: TV-Y, TV-Y7, TV-G, TV-PG, TV-14 or TV-MA (See Step 4) and press the ► button. The "🔒" symbol will be displayed for each sub-rating. While "🔒" is selected, press the **ENTER**  button to go to a sub rating. Press **ENTER**  to block the sub rating. To select a different TV-Rating, press the ▲ or ▼ button and then repeat the process.



- **ALL:** Lock all TV ratings.
- **FV:** Fantasy violence
- **V:** Violence
- **S:** Sexual situation
- **L:** Adult Language
- **D:** Sexually Suggestive Dialog

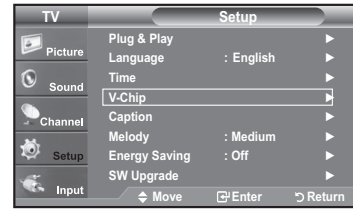
➤ The V-chip will automatically block certain categories that are "More restrictive". For example, if you block "L" sub-rating in TV-PG, then the "L" sub-ratings in TV-14 and TV-MA will automatically be blocked.


- Press the **EXIT** button to clear all the screens. (Or proceed to the next section, and set up additional restrictions based on the MPAA codes.)
- These categories consist of two separate groups: TV-Y and TV-Y7 (young children through age 7) and TV-G through TV-MA (everybody else). The restrictions for these two groups work independently: If a household includes very young children as well as young adults, the TV guidelines must be set up separately for each age group. (See next step.)

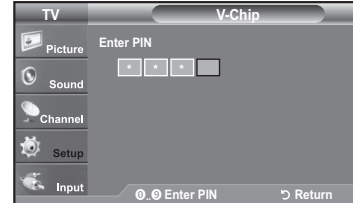
How to Set up Restrictions Using the MPAA Ratings: G, PG, PG-13, R, NC-17, X, NR

The MPAA rating system uses the Motion Picture Association of America (MPAA) system and its main application is for movies. When the V-Chip lock is on, the TV will automatically block any programs that are coded with objectionable ratings (either MPAA or TV-Ratings).

1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Setup", then press the **ENTER**  button.
2. Press the **▲** or **▼** button to select "V-Chip", then press the **ENTER**  button.
The message "Enter PIN" will appear. Enter your 4 digit PIN number.

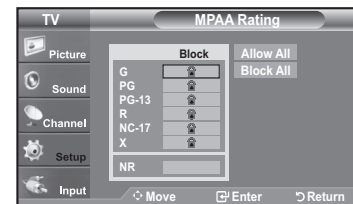
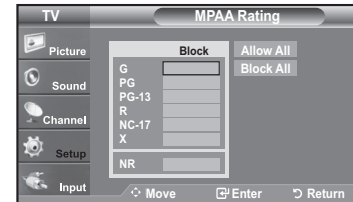
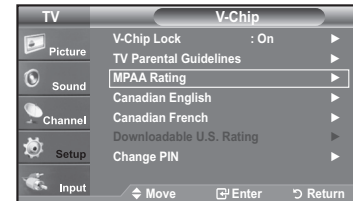





3. The "V-Chip" screen will appear. Press the **▲** or **▼** button to select "MPAA Rating", then press the **ENTER**  button.



4. The "MPAA Rating" screen will appear. Repeatedly press the **▲** or **▼** button to select a particular MPAA category. Pressing the **▲** or **▼** button will cycle through the MPAA categories:





- **G**: General audience (no restrictions).
- **PG**: Parental guidance suggested.
- **PG-13**: Parents strongly cautioned.
- **R**: Restricted. Children under 17 should be accompanied by an adult.
- **NC-17**: No children under age 17.
- **X**: Adults only.
- **NR**: Not rated.



- > Allow all: Press to unlock all TV ratings.
Block all: Press to lock all TV ratings.
- > While a particular category is selected, press the **ENTER**  button to activate it.
The " symbol will be displayed. Press the **ENTER**  button to block or unblock the category.
- > The V-Chip will automatically block any category that is "more restrictive".
For example, if you block the "PG-13" category, then "R", "NC-17" and "X" will automatically be blocked also.

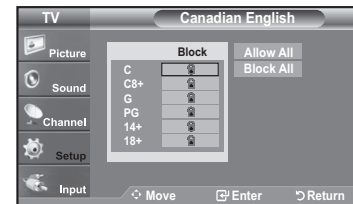
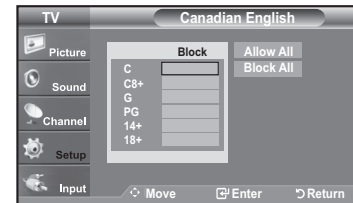
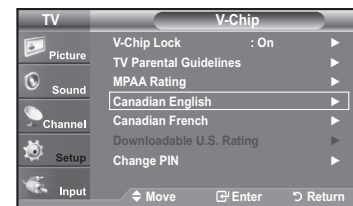
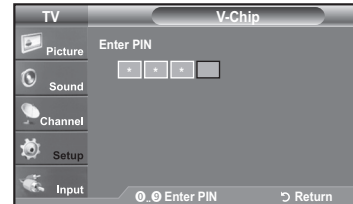
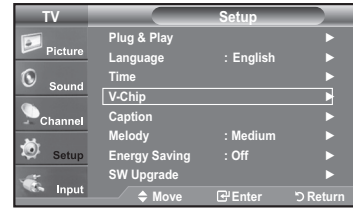
Press the **EXIT** button to exit.

How to Set up Restrictions Using the 'Canadian English'



1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Setup", then press the **ENTER**  button.
2. Press the **▲** or **▼** button to select "V-Chip", then press the **ENTER**  button.
The message "Enter PIN" will appear. Enter your 4 digit PIN number.
3. The "V-Chip" screen will appear. Press the **▲** or **▼** button to select "Canadian English", then press the **ENTER**  button.
4. Press the **▲** or **▼** button to select a appropriate restriction.
Press the **ENTER**  button to activate the restriction selected. The "🔒" symbol is indicated.
Press the **EXIT** button to exit.
 - Allow all: Press to unlock all TV ratings.
Block all: Press to lock all TV ratings.

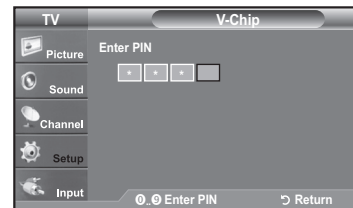
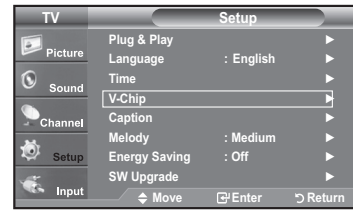
- **C**: Programming intended for children under age 8.
 - **C8+**: Programming generally considered acceptable for children 8 years and over to watch on their own.
 - **G**: General programming, suitable for all audiences.
 - **PG**: Parental Guidance.
 - **14+**: Programming contains themes or content which may not be suitable for viewers under the age of 14.
 - **18+**: Adult programming.


 - The V-Chip will automatically block any category that is "more restrictive".
For example, if you block G category, then PG, 14+ and 18+ will automatically be blocked also.

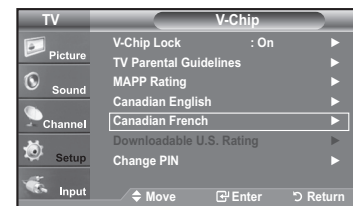



How to Set up Restrictions Using the 'Canadian French'

1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Setup", then press the **ENTER**  button.
2. Press the **▲** or **▼** button to select "V-Chip", then press the **ENTER**  button.
The message "Enter PIN" will appear. Enter your 4 digit PIN number.



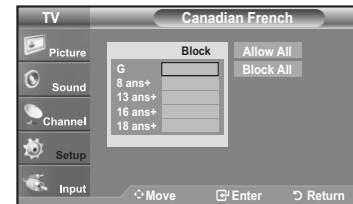
3. The "V-Chip" screen will appear. Press the **▲** or **▼** button to select "Canadian French", then press the **ENTER**  button.



4. Press the **▲** or **▼** button to select an appropriate restriction.
Press the **ENTER**  button to activate the restriction selected. The "🔒" symbol is indicated.

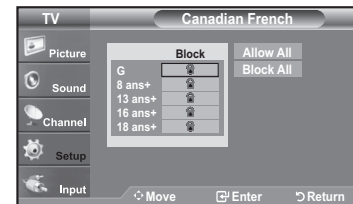
Press the **EXIT** button to exit.

- Allow all: Press to unlock all TV ratings.
- Block all: Press to lock all TV ratings.





- **G:** General
- **8 ans+:** Programming generally considered acceptable for children 8 years and over to watch on their own.
- **13 ans+:** Programming may not be suitable for children under the age of 13.
- **16 ans+:** Programming is not suitable for children under the age of 16.
- **18 ans+:** Programming restricted to adults.

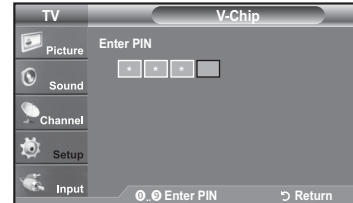
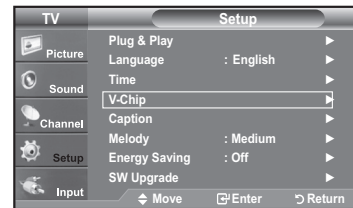
- The V-Chip will automatically block any category that is "more restrictive".
For example, if you block 8 ans+ category, then 13 ans+, 16 ans+ and 18 ans+ will automatically be blocked also.




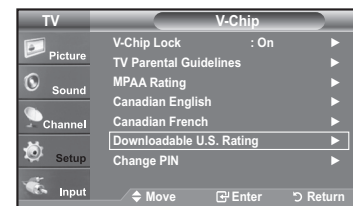
Using the V-Chip for Digital channels


Parental restriction information can be used while watching DTV channels.

1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Setup", then press the **ENTER**  button.
2. Press the **▲** or **▼** button to select "V-Chip", then press the **ENTER**  button.
The message "Enter PIN" will appear. Enter your 4 digit PIN number.



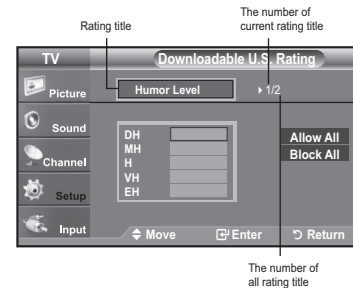
3. The "V-Chip" screen will appear. Press the **▲** or **▼** button to select "Downloadable U.S. Rating", then press the **ENTER**  button.
 - > If information is not downloaded from the broadcasting station, the Downloadable U.S. rating menu is deactivated.
 - > Parental restriction information is automatically downloaded while watching DTV channels. It may take several seconds.
 - > The Downloadable U.S. rating menu is available for use after information is downloaded from the broadcasting station. However, depending on the information from the broadcasting station, it may not be available for use.



4. Press the **▲** or **▼** button to select a appropriate restriction.
Press the **ENTER**  button to activate the restriction selected. The "🔒" symbol is indicated.






Press the **EXIT** button to exit.

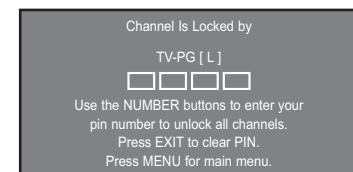
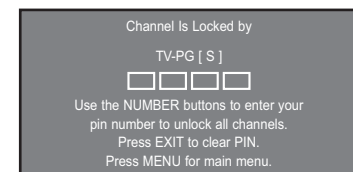
- > Allow all: Press to unlock all TV ratings. / Block all: Press to lock all TV ratings.
- > Parental restriction levels differ depending on the broadcasting station.
- > The default menu name and Downloadable US rating changes depending on the downloaded information.
- > Even if you set the On-screen display to your desired language, the "Downloadable U.S. Rating" menu will appear in English only.
- > The rating will automatically block certain categories that are more restrictive.
- > The rating titles (For example: Humor Level., etc) and TV ratings (For example: DH, MH, H., etc) may differ depending on the broadcasting station.



How to Reset the TV after the V-Chip Blocks a Channel ("Emergency Escape")





If the TV is tuned to a restricted channel, the V-Chip will block it. The screen will go blank and the following message will appear:

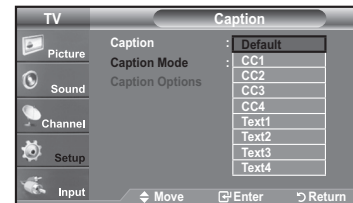
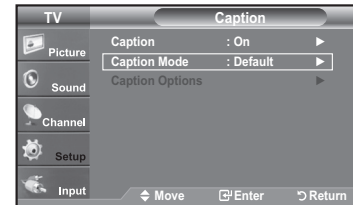
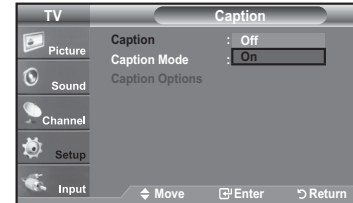
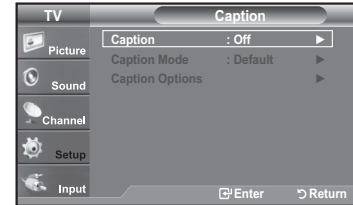
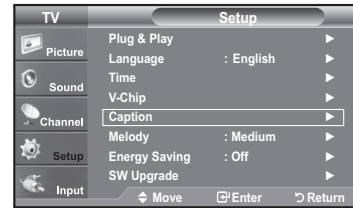
1. Enter your PIN.
To resume normal viewing, tune to a different channel using **CH**  or **CH**  button. Under certain conditions (depending on the rating of the local TV programs) the V-Chip might lock out all the channels. In this case, use the V-Chip function for an "emergency escape":
2. Press the **MENU** button. Press the **▲** or **▼** button to select "Setup", then press the **ENTER**  button.
3. Press the **▲** or **▼** button to select "V-Chip", then press the **ENTER**  button.
4. Enter your PIN, then press the **ENTER**  button and press the **▲** or **▼** button to temporarily disable the V-Chip Lock.
 - > If you forget the PIN, press the remote-control buttons in the following sequence, which resets the pin to 0-0-0-0 : Power Off. → MUTE → 8 → 2 → 4 → Power On.





Viewing Closed Captions (On-Screen Text Messages) - Analog

The Analog Caption function operates in either analog TV channel mode or when a signal is supplied from an external device to TV. (Depending on the broadcasting signal, the Analog Caption function may operate on digital channels.)

1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Setup", then press the **ENTER**  button.
2. Press the **▲** or **▼** button to select "Caption", then press the **ENTER**  button.
3. Press the **ENTER**  button to select "Caption".
Press the **▲** or **▼** button to select "On", then press the **ENTER**  button.




4. Press the **▲** or **▼** button to select "Caption Mode", then press the **ENTER**  button.
Press the **▲** or **▼** button to select submenu (Default, CC1~CC4 or Text1~Text4) you want, then press the **ENTER**  button.

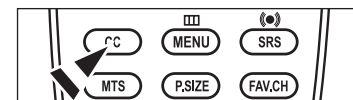
Press the **EXIT** button to exit.

- **The default is "CC1".**
- **CC1:** The Primary Synchronous Caption Service. These are captions in the primary language that must be in sync with the sound, preferably matched to a specific frame.
- **CC2:** The Special Non-Synchronous Use Captions.
This channel carries data that is intended to augment information carried in the program.
- **CC3:** Secondary Synchronous Caption Service.
Alternate program-related caption data, typically second language captions.
- **CC4:** Special Non-Synchronous Use Captions. Similar to CC2.
- **Text1:** First Text Service. This may be various non-program related data.
- **Text2:** Second Text Service. Additional data, usually not program related.
- **Text3/Text4:** Third and Fourth Text Services.
These data channels should be used only if Text1 and Text2 are not sufficient.

➤ The Caption feature doesn't work in Component, HDMI or PC modes.

➤ The availability of captions depends on the program being broadcast.

-  Press the **CC** button on the remote control to turn the Caption "On" or "Off".



Viewing Closed Captions (On-Screen Text Messages) - Digital

The Digital Captions function operates on digital channels.

1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Setup", then press the **ENTER** button.
2. Press the **▲** or **▼** button to select "Caption", then press the **ENTER** button.
3. Press the **ENTER** button to select "Caption".
Press the **▲** or **▼** button to select "On", then press the **ENTER** button.

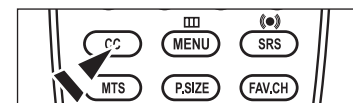
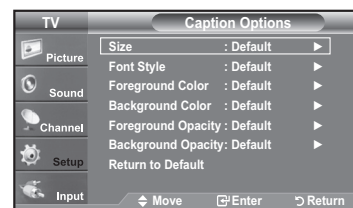
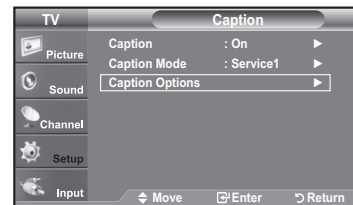
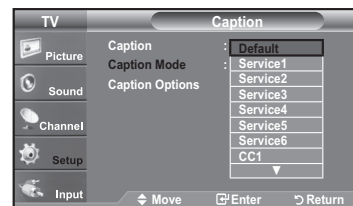
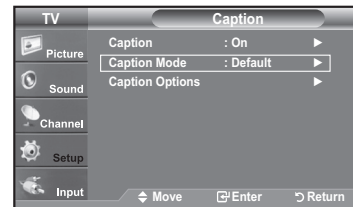
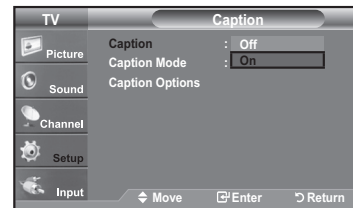
4. Press the **▲** or **▼** button to select "Caption Mode", then press the **ENTER** button.
Press the **▲** or **▼** button to select submenu (Default, Service1~Service6, CC1~CC4 or Text1~Text4) you want, then press the **ENTER** button.

5. Press the **▲** or **▼** button to select "Caption Options", then press the **ENTER** button.
 - > "Caption Options" are available only when "Default" and "Service 1~Service 6" can be selected in "Caption Mode".
 - > Service1~6 in digital caption mode may not be available depending on the broadcast.
6. Press the **▲** or **▼** button to select "Size", then press the **ENTER** button.
Press the **▲** or **▼** button to select the desired Caption option, then press the **ENTER** button.
Press the **▲** or **▼** button to select the desired sub-menu options (see options below), then press **ENTER** button.

Press the **EXIT** button to exit.

- > The availability of captions depends on the program being broadcast.
- > "Default" means to follow the standard set by the broadcaster.
- > Foreground and Background cannot be set to have the same color.
- > "Foreground Opacity" and "Background Opacity" cannot be both set to Transparent.



- **Size:** This option consists of "Default", "Small", "Standard" and "Large". The default is "Standard".
- **Font Style:** This option consists of "Default", "Style0 ~ Style 7". You can change the font you want. The default is "Style 0".
- **Foreground Color:** This option consists of "Default", "White", "Black", "Red", "Green", "Blue", "Yellow", "Magenta" and "Cyan". You can change the color of the letter. The default is "White".
- **Background Color:** This option consists of "Default", "White", "Black", "Red", "Green", "Blue", "Yellow", "Magenta" and "Cyan". You can change the background color of the caption. The default is "Black".
- **Foreground Opacity:** This option consists of "Default", "Transparent", "Translucent", "Solid" and "Flashing". You can change the opacity of the letter.
- **Background Opacity:** This option consists of "Default", "Transparent", "Translucent", "Solid", and "Flashing". You can change the background opacity of the caption.
- **Return to Default:** This option sets each of "Size", "Font Style", "Foreground Color", "Background Color", "Foreground Opacity" and "Background Opacity" to its default.




- Press the **CC** button on the remote control to turn the Caption "On" or "Off".

Adjusting the TV On/Off Melody Sound

A melody sound can be set to come on when the TV is powered On or Off.


1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Setup", then press the **ENTER**  button.
2. Press the **▲** or **▼** button to select "Melody", then press the **ENTER**  button.

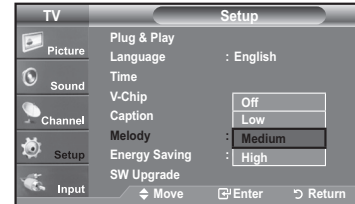
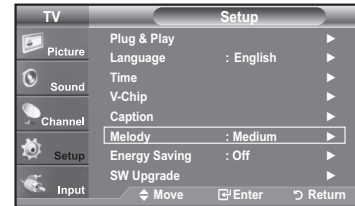
3. Press the **▲** or **▼** button to select "Off", "Low", "Medium" or "High", then press the **ENTER**  button.

- **Off** : Turns off the melody function.
- **Low** : Sets the melody volume to low.
- **Medium** : Sets the melody volume to medium.
- **High** : Sets the melody volume to high.

Press the **EXIT** button to exit.




➤ The Melody does not play

- When no sound is output from the TV because the **MUTE** button has been pressed.
- When no sound is output from the TV because the Volume has been reduced to minimum with the **VOL**  button.
- When the TV is turned off by Timer function.



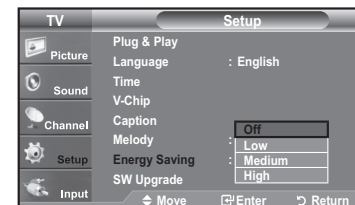
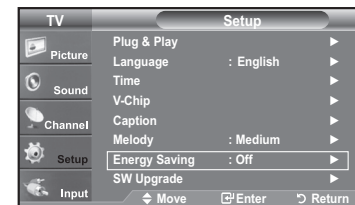
Using the Energy Saving Feature

This feature adjusts the brightness of the TV in order to reduce power consumption. When watching TV at night, set the "Energy Saving" mode option to "High" to reduce eye fatigue as well as power consumption.

1. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Setup", then press the **ENTER**  button.
2. Press the **▲** or **▼** button to select "Energy Saving", then press the **ENTER**  button.
Select the required option ("Off", "Low", "Medium", "High") by pressing the **▲** or **▼** button.
Press the **ENTER**  button.

- **Off**: Turns off the energy saving function.
- **Low**: Sets the TV to low energy saving mode.
- **Medium**: Sets the TV to medium energy saving mode.
- **High**: Sets the TV to high energy saving mode.

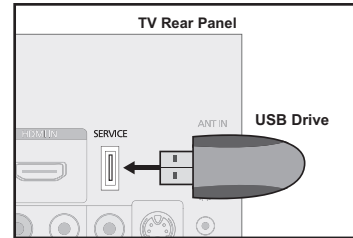
Press the **EXIT** button to exit.



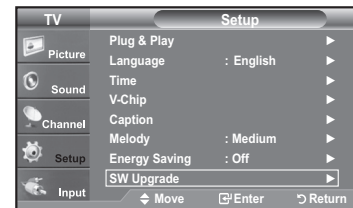
Upgrading the Software

Samsung may offer upgrades for TV's firmware in the future. Please contact the Samsung call center at 1-800-SAMSUNG (726-7864) to receive information about downloading upgrades and using a USB drive. Upgrades will be possible by connecting a USB drive to the USB port located on your TV.

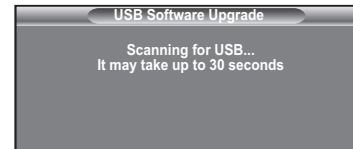
1. Insert a USB drive containing the firmware upgrade into the **SERVICE** port on the rear of the TV.



2. Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Setup", then press the **ENTER** button.
3. Press the **▲** or **▼** button to select "SW upgrade", then press the **ENTER** button.



4. Press the **ENTER** button.
The message "Scanning for USB... It may take up to 30 seconds." is displayed.
5. The message "Upgrade version XXXX to version XXXX The system would be reset after upgrade." is displayed.
Press the **◀** or **▶** to select the "Yes", then press the **ENTER** button.



Please be careful to not disconnect the power or remove the USB drive while upgrades are being applied. The TV will turn off and turn on automatically after completing the firmware upgrade. Please check the firmware version after the upgrades are complete. When software is upgraded, video and audio settings you have made will return to their default (factory) settings. We recommend you write down your settings so that you can easily reset them after the upgrade.

Appendix

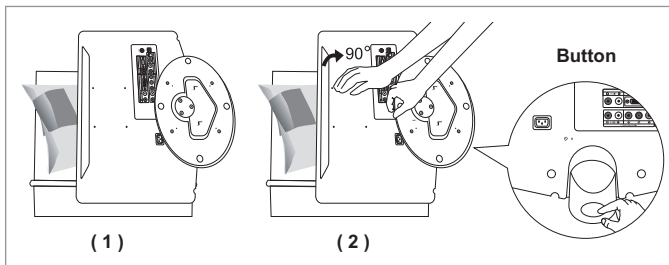
Troubleshooting

If the TV seems to have a problem, first try this list of possible problems and solutions.
If none of these troubleshooting tips apply, call your nearest Samsung service center.

Problem	Possible Solution
Poor picture	Try another channel. Adjust the antenna. Check all wire connections.
Poor sound quality.	Try another channel. Adjust the antenna.
No picture or sound.	Try another channel. Press the SOURCE button. Make sure the TV is plugged in. Check the antenna connections.
No sound or sound is too low at maximum volume.	First, check the volume of units connected to your TV (digital broadcasting receiver, DVD, cable broadcasting receiver, VCR, etc.). Then, adjust the TV volume accordingly.
Picture rolls vertically.	Check all wire connections.
The TV operates erratically.	Unplug the TV for 30 seconds, then try operating it again.
The TV won't turn on.	Make sure the wall outlet is working.
Remote control malfunctions	Replace the remote control batteries. Clean the upper edge of the remote control (transmission window). Check the battery terminals.
"Check signal cable" message.	Ensure that the signal cable is firmly connected to the PC source.
"Not Supported Mode" message.	Check the maximum resolution and connected device's Video frequency. Compare these values with the data in the Display Modes.
Digital broadcasting screen problem.	Please check the digital signal strength and input antenna.
The image is too light or too dark.	Adjust the Brightness and Contrast. Adjust the Fine tuning.
Black bars on the screen.	Make sure the broadcast you're receiving is High Definition (HD). HD channels sometimes broadcast Standard Definition (SD) programming, which can cause black bars. Set your cable/satellite box to stretch or widescreen mode to eliminate the bars.
Picture has a Red/Green or Pink tint.	Make sure the Component cables are connected to the correct jacks.
Closed Captioning not working.	If you are using a Cable/Satellite box, you must set Closed Captioning on the box, not your TV.
Snowy picture	Your cable box may need a firmware upgrade. Please contact your Cable company.
Ghosting on picture	This is sometimes caused by compatibility issues with your cable box. Try connecting Component cables instead.

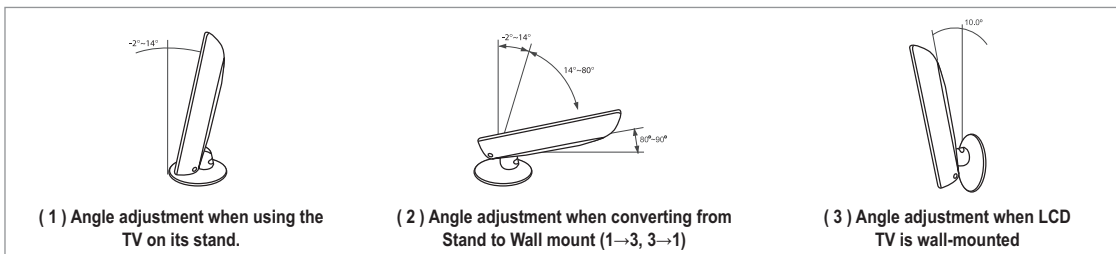
Problem	Possible Solution						
Horizontal bars appear to flicker, jitter or shimmer on the image.	Adjust the Coarse tuning and then adjust the Fine tuning.						
Vertical bars appear to flicker, jitter or shimmer on the image.	Adjust the Coarse tuning and then adjust the Fine tuning.						
Screen is black and power indicator light blinks steadily.	On your computer check: Power, Signal Cable. The TV is using its power management system. Move the computer's mouse or press any key on the keyboard.						
Image is not stable and may appear to vibrate when you have a computer connected to the PC input.	<p>If the setting is not correct, use your computer utility program to change the display settings. > Your TV supports multiscan display functions within the following frequency domain:</p> <table> <tr> <td>Horizontal frequency (kHz)</td><td>30~60</td></tr> <tr> <td>Vertical frequency (Hz)</td><td>60~75</td></tr> <tr> <td>PC Maximum refresh rate (at 60 Hz)</td><td>LN19A450C1D, LN19A451C1D: 1440 X 900 LN22A450C1D, LN22A451C1D: 1680 X1050</td></tr> </table>	Horizontal frequency (kHz)	30~60	Vertical frequency (Hz)	60~75	PC Maximum refresh rate (at 60 Hz)	LN19A450C1D, LN19A451C1D: 1440 X 900 LN22A450C1D, LN22A451C1D: 1680 X1050
Horizontal frequency (kHz)	30~60						
Vertical frequency (Hz)	60~75						
PC Maximum refresh rate (at 60 Hz)	LN19A450C1D, LN19A451C1D: 1440 X 900 LN22A450C1D, LN22A451C1D: 1680 X1050						
Image is not centered on the screen.	Adjust the horizontal and vertical position. The screen position must be adjusted on the output source (i.e. STB) with a digital signal.						
The picture appears distorted in the corner of the screen.	If "Just Scan" is selected with some external devices, the picture may appear distorted in the corner of the screen. This symptom is caused by the external devices, not TV.						
The "Resets all settings to the default values" message appears.	This appears when you press and hold the EXIT button for a while. The product settings are reset to the factory defaults.						
<p>This TFT LCD panel uses a panel consisting of sub pixels (LN19A450C1D, LN19A451C1D: 3 888 000 / LN22A450C1D, LN22A451C1D: 5 292 000) which require sophisticated technology to produce. However, there may be few bright or dark pixels on the screen. These pixels will have no impact on the performance of the product.</p>							

How to Adjust the Stand (LN19A450C1D, LN19A451C1D)



1. Place the front of the TV onto a soft cloth or cushion on a table as in Figure (1).
- Align the TV bottom along the table edge.
2. Press on the center of the TV back.
Adjust the stand as in Figure (2) while pressing the button on the back of the stand.
3. Place the TV on the table so that the TV sits safely on the table.

How to Adjust the Angle of the TV (LN19A450C1D, LN19A451C1D)



➤ When you adjust the stand, press the button on the back of the stand.

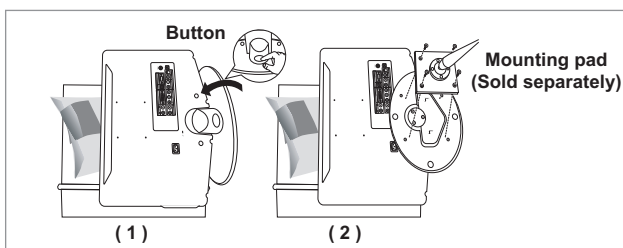
1. Figure (1) shows the adjustment angle ($-2^{\circ}\sim 14^{\circ}$) when you use the LCD on its stand.
Excessive tilting can turn the LCD TV over which may cause damage.
2. Figure (2) shows the adjustment angle ($14^{\circ}\sim 80^{\circ}$) when you convert the LCD from stand-based use to wall-mount.
3. Figure (3) shows the adjustment angle ($0^{\circ}\sim 10^{\circ}$) when you mount the LCD TV to a wall.

➤ You will hear a "Click" sound when changing the angle from 1 to 2 or 3 to 2.

Installing the Wall Mount Kit (LN19A450C1D, LN19A451C1D)

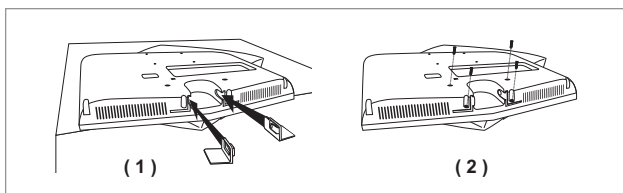
Wall mount items (sold separately) allow you to mount the TV on the wall. For the detailed information on installing the Wall Mount, see the instruction in the Wall Mount items. Contact a technician for installing the wall bracket. Samsung Electronics is not responsible for any damage to the product or injury to yourself or others if you choose to install the TV on your own.

Installing VESA Compliant Mounting Devices (LN19A450C1D, LN19A451C1D)



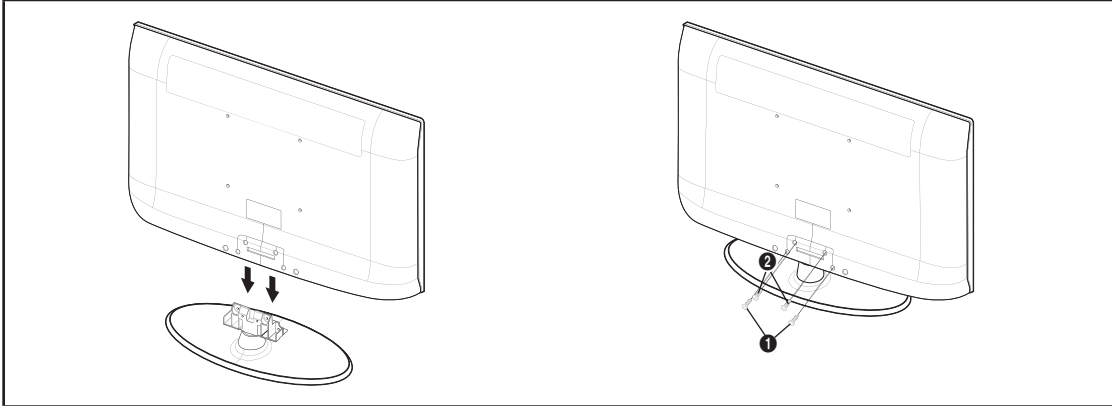
1. Place the TV face down on a soft cloth or cushion on a table.
2. Adjust the stand, pressing the button on the back of the stand.
3. Align the mounting interface pad (not supplied) with the holes in the stand bottom and secure it with the four screws that come with the arm-type base, wall mount hanger or other bases (not supplied).

Using the Decoration Covers (LN19A450C1D, LN19A451C1D)



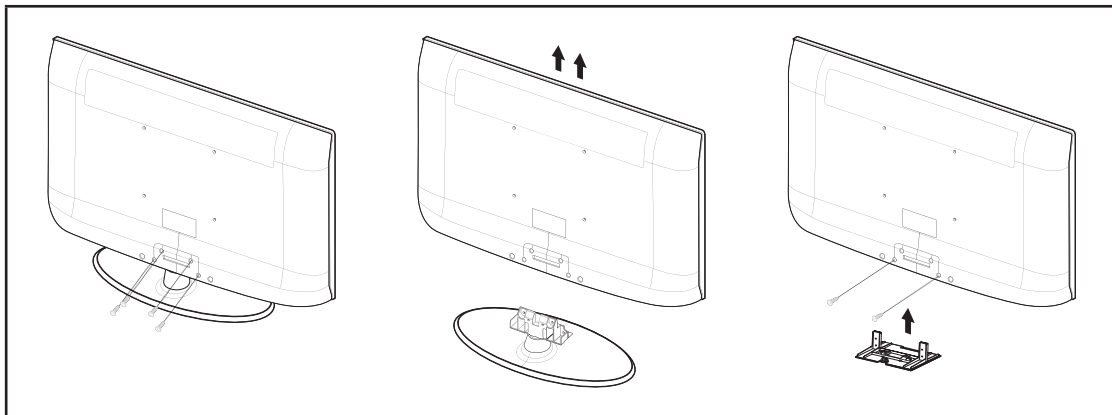
1. When installing the TV on the wall without using the stand, insert decoration covers into the holes as described in the picture (1).
2. After inserting the decoration covers, fasten them with 4 screws as described in the picture (2).

Installing the Stand



- 1.** Connect your LCD TV and the stand.
 - Two or more people should carry the TV.
 - Make sure to distinguish between the front and back of the stand when assembling them.
 - To make sure the TV is installed on the stand at a proper level, do not apply excess downward pressure to the upper left or right sides of the TV.
- 2.** Fasten two screws at position ❶ and then fasten two screw at position ❷.
 - Stand the product up and fasten the screws. If you fasten the screws with the LCD TV placed down, it may lean to one side.

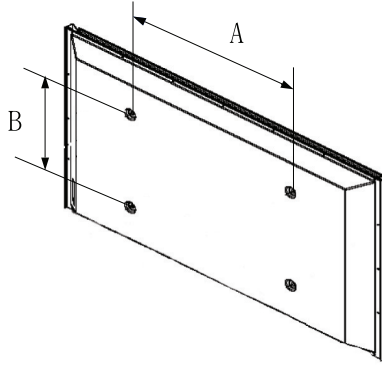
Disconnecting the Stand



- 1.** Remove four screws from the back of the TV.
- 2.** Separate the stand from the TV.
 - Two or more people should carry the TV.
- 3.** Cover the bottom hole with the cover.

Wall Mount Kit Specifications (VESA)

Install your wall mount on a solid wall perpendicular to the floor.
When attaching to other building materials, please contact your nearest dealer.
If installed on a ceiling or slanted wall, it may fall and result in severe personal injury.



Product Family	inches	VESA Spec. (A * B)	Standard Screw	Quantity
LCD-TV	23~ 26	200 * 100	M4	4
	32 ~ 40	200 * 200	M6	
	46 ~ 52	600 * 400	M8	
	57	700 * 400 (No VESA)		
	57 ~ 70	800 * 400		
	80 ~	1400 * 800		
PDP-TV	42 ~ 50	600 * 400	M8	4
	55 ~ 70	800 * 400		6
	63	No VESA		4
	80 ~	1400 * 800		

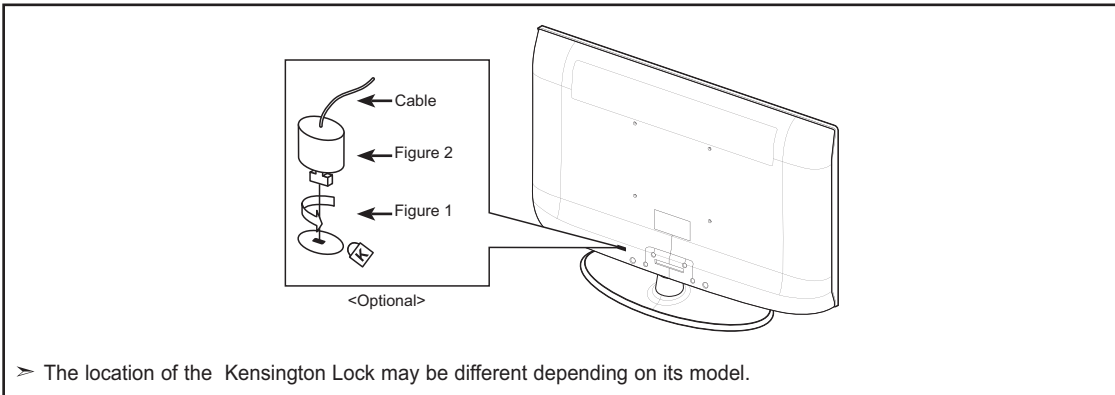
- Standard dimensions for wall mount kits are shown in the table above.
- When purchasing our wall mount kit, a detailed installation manual and all parts necessary for assembly are provided.
- Do not use screws longer than the standard dimension, as they may cause damage to the inside of the TV set.
- For wall mounts that do not comply with the VESA standard screw specifications, the length of the screws may differ depending on their specifications.
- Do not use screws that do not comply with the VESA standard screw specifications.
Do not use fasten the screws too strongly, this may damage the product or cause the product to fall, leading to personal injury. Samsung is not liable for these kinds of accidents.
- Samsung is not liable for product damage or personal injury when a non-VESA or non-specified wall mount is used or the consumer fails to follow the product installation instructions.
- Do not exceed 15 degrees tilt when mounting this TV.



Do not install your Wall Mount Kit while your TV is turned on.
It may result in personal injury due to electric shock.

Using the Anti-Theft Kensington Lock

The Kensington Lock is a device used to physically fix the system when using it in a public place. The locking device has to be purchased separately. The appearance and locking method may differ from the illustration depending on the manufacturer. Refer to the manual provided with the Kensington Lock for proper use. The locking device has to be purchased separately.



1. Insert the locking device into the Kensington slot on the LCD TV (Figure 1) and turn it in the locking direction (Figure 2).
2. Connect the Kensington Lock cable.
3. Fix the Kensington Lock to a desk or a heavy stationary object.

Specifications

Model Name	LN19A450C1D, LN19A451C1D	LN22A450C1D, LN22A451C1D
Screen Size (Diagonal)	19 inches	22 inches
PC Resolution	1440 x 900 @ 60 Hz	1680 x 1050 @ 60 Hz
Sound Output	3W x 2	3W x 2
Dimensions (WxDxH) Body With stand	18.8 X 2.3 X 13.7 inches (477.1 X 57.5 X 348.6 mm) 18.8 X 7.1 X 15.2 inches (477.1 X 180.2 X 387 mm)	22.0 X 2.6 X 16.0 inches (557.8 X 66.5 X 406.9 mm) 22.0 X 8.5 X 17.8 inches (557.8 X 216 X 452.9 mm)
Weight With Stand Without stand	11.5lbs (5.2 kg) 10.4lbs (4.7 kg)	16.1lbs (7.3 kg) 13.0lbs (5.9 kg)
Environmental Considerations Operating Temperature Operating Humidity Storage Temperature Storage Humidity	50 °F to 104 °F (10 °C to 40 °C) 10% to 80%, non-condensing -4 °F to 113 °F (-20 °C to 45 °C) 5% to 95%, non-condensing	50 °F to 104 °F (10 °C to 40 °C) 10% to 80%, non-condensing -4 °F to 113 °F (-20 °C to 45 °C) 5% to 95%, non-condensing
Stand Swivel (Left / Right)	-0° ~ 0°	-0° ~ 0°

- Design and specifications are subject to change without prior notice.
- This device is a Class B digital apparatus.
- For the power supply and Power Consumption, refer to the label attached to the product.

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left blank.***

**Contact SAMSUNG WORLDWIDE**

If you have any questions or comments relating to Samsung products, please contact the SAMSUNG customer care center.

Contacte con SAMSUNG WORLDWIDE

Si tiene alguna pregunta o comentario referente a nuestros productos, por favor contacte con nuestro Servicio de Atención al Cliente.

Country	Customer Care Center☎	Web Site	Address
CANADA	1-800-SAMSUNG(726-7864)	www.samsung.com/ca	Samsung Electronics Canada Inc., Customer Service 55 Standish Court Mississauga, Ontario L5R 4B2 Canada
			Samsung Electronique Canada Inc., Service à la Clientèle 55 Standish Court Mississauga, Ontario L5R 4B2 Canada
U.S.A	1-800-SAMSUNG(726-7864)	www.samsung.com	Samsung Electronics America, Inc. 105 Challenger Road Ridgefield Park, NJ 07660-0511



BN68-01395B-00

SAMSUNG

Quick Setup Guide

STOP
Please do not return
this unit

If you are having problems operating
this TV,
Please call:

1-800-SAMSUNG (1-800-726-7864)

For Web support please visit
www.samsung.com/support

1-800-SAMSUNG (7267864)

Samsung Electronics America, Inc.
105 Challenger Road Ridgefield Park, NJ 07660-0511

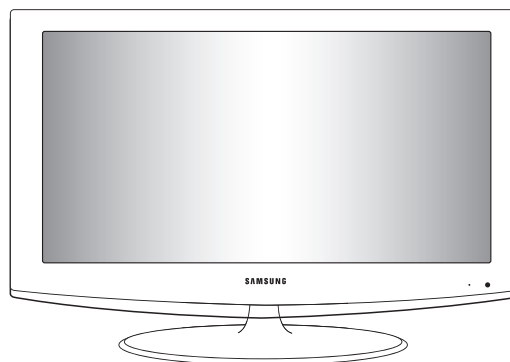
Samsung Electronics Canada Inc., Customer Service
55 Standish Court Mississauga, Ontario L5R 4B2

Call center hours of operation (Mon-Sun 9AM-12AM EST).

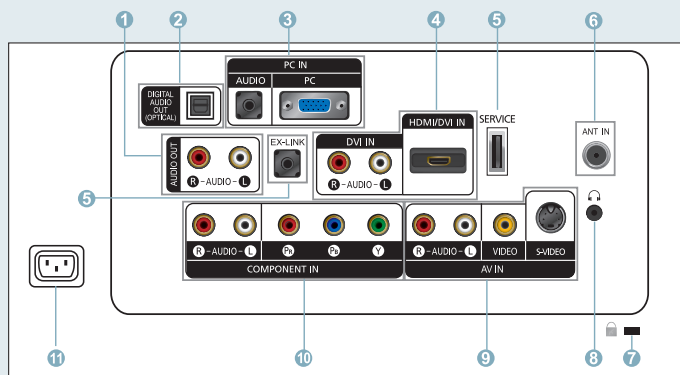
To register this product please visit

www.samsung.com/global/register.

**LN19A450C1D/LN19A451C1D/
LN22A450C1D/LN22A451C1D**







Rear Panel / Side Panel Jacks





- | | | |
|-------------------------------|--------------------------------------|-------------------|
| 1 AUDIO OUT | 4 DVI IN[R-AUDIO-L]
/ HDMI/DVI IN | 8 HEADPHONE |
| 2 DIGITAL AUDIO OUT (OPTICAL) | 5 SERVICE, EX-LINK | 9 AV IN / S-VIDEO |
| 3 PC IN [PC] / [AUDIO] | 6 ANT IN | 10 COMPONENT IN |
| | 7 KENSINGTON LOCK | 11 POWER INPUT |

Video Input Performance Comparison




	HDMI/DVI	Best
	PC/COMPONENT	Better
	S-VIDEO	Good
	VIDEO	Normal

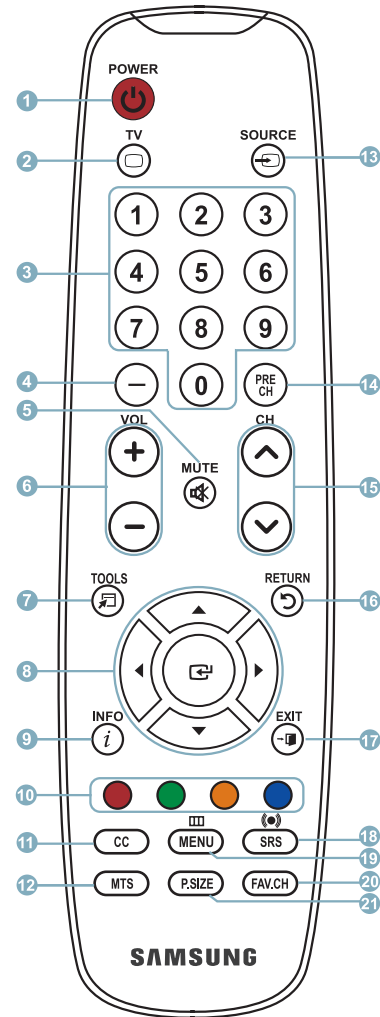
Audio Output Performance Comparison

	OPTICAL (Digital)	Best
	AUDIO (Analog)	Normal

Remote Control

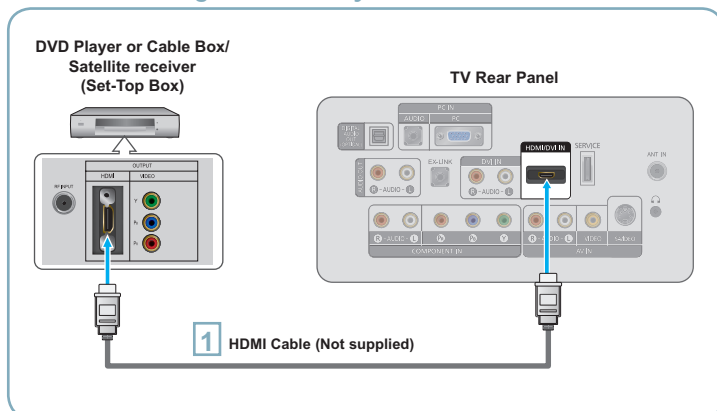
See "Remote Control" in the owner's instructions for details.

- 1 POWER**
Turns the TV on and off.
- 2 TV**
Selects the TV mode directly.
- 3 NUMERIC BUTTONS**
Press to change the channel.
- 4 **
Press to select additional channels(digital and analog) being broadcast by the same station.
For example, to select channel "54-3", press "54", then press "-" and "3".
- 5  (MUTE)**
Press to temporarily cut off the sound.
- 6 VOL+ / VOL-**
Press to increase or decrease the volume.
- 7 TOOLS**
Use to quickly select frequently used functions.
- 8 UP ▲ / DOWN ▼ / LEFT ◀ / RIGHT ▶ / ENTER **
Use to select on-screen menu items and change menu values.
- 9 INFO**
Press to display information on the TV screen.
- 10 COLOR BUTTONS**
Use these buttons in the Channel list, etc.
- 11 CC**
Controls the caption decoder.
- 12 MTS**
Press to choose stereo, mono or Separate Audio Program (SAP broadcast).
- 13 SOURCE**
Press to display and select the available video sources.
- 14 PRE CH**
Tunes to the previous channel.
- 15 CH ▲ / CH ▼**
Press to change channels.
- 16 RETURN**
Returns to the previous menu.
- 17 EXIT**
Press to exit the menu.
- 18 SRS**
Selects SRS TruSurround XT mode.
- 19 MENU**
Displays the main on-screen menu.
- 20 FAV.CH**
Press to switch to your favorite channels.
- 21 P.SIZE**
Picture size selection.



Connections

Connecting a DVD Player or Cable Box/Satellite receiver (Set-Top Box) via HDMI



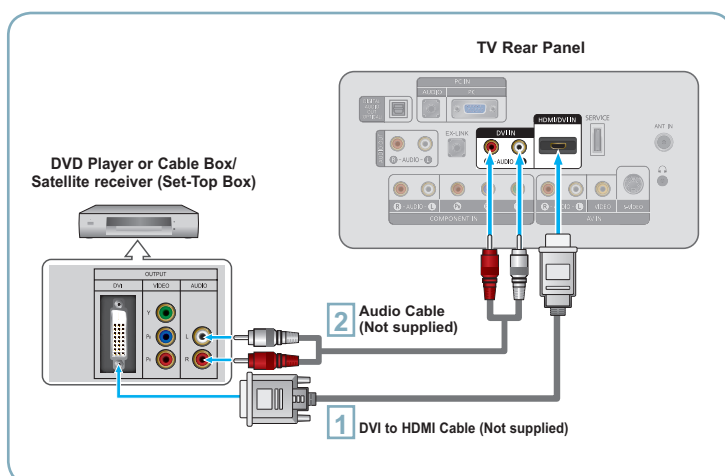
- 1 Connect an HDMI Cable between the HDMI/DVI IN jack on the TV and the HDMI jack on the DVD Player or Cable Box/Satellite receiver (Set-Top Box).

What is HDMI?

- HDMI(High-Definition Multimedia Interface), is an interface that enables the transmission of digital audio and video signals using a single cable.
- The difference between HDMI and DVI is that the HDMI device is smaller in size and has the HDCP (High Bandwidth Digital Copy Protection) coding feature installed.

➤ Each DVD Player or Cable Box/Satellite receiver (Set-Top Box) has a different back panel configuration.

Connecting a DVD Player or Cable Box/Satellite receiver (Set-Top Box) via DVI

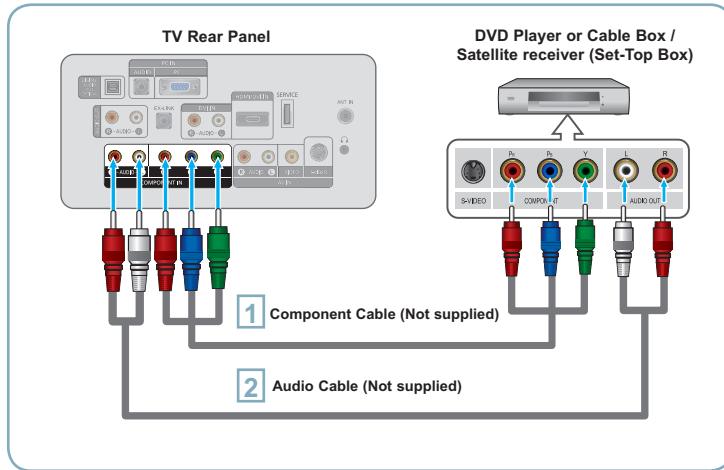


- 1 Connect a DVI to HDMI Cable or DVI-HDMI Adapter between the HDMI/DVI IN jack on the TV and the DVI jack on the DVD Player or Cable Box/Satellite receiver (Set-Top Box).

- 2 Connect Audio Cables between the DVI IN [R-AUDIO-L] jack on the TV and the DVD Player or Cable Box/Satellite receiver (Set-Top Box).

- Each DVD Player or Cable Box/Satellite receiver (Set-Top Box) has a different back panel configuration.
- When connecting a DVD Player or Cable Box/Satellite receiver (Set-Top Box), match the color of the connection terminal to the cable.
- When using an HDMI/DVI cable connection, you must use the HDMI/DVI IN jack.

Connecting a DVD Player or Cable Box/Satellite receiver (Set-Top Box) via Component cables

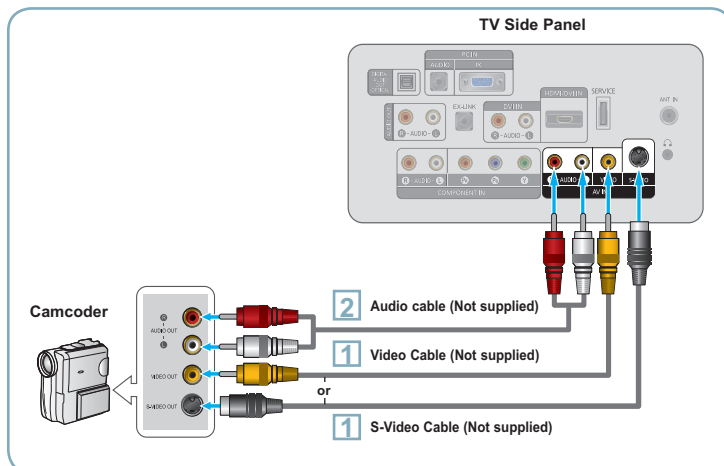


1 Connect a Component Cable between the COMPONENT IN [Y, Pb, Pr] jacks on the TV and the COMPONENT [Y, Pb, Pr] jacks on the DVD Player or Cable Box/Satellite receiver (Set-Top Box).

2 Connect Audio Cables between the COMPONENT IN [R-AUDIO-L] jacks on the TV and the AUDIO OUT jacks on the DVD Player or Cable Box/Satellite receiver (Set-Top Box).

- Component video separates the video into Y (Luminance (brightness)), Pb (Blue) and Pr (Red) for enhanced video quality.
Be sure to match the component video and audio connections.
For example, if connecting a Component video cable to COMPONENT IN, connect the audio cable to COMPONENT IN also.
- Each DVD Player or Cable Box/Satellite receiver (Set-Top Box) has a different back panel configuration.
- When connecting a DVD Player or Cable Box/Satellite receiver (Set-Top Box), match the color of the connection terminal to the cable.

Connecting a Camcorder



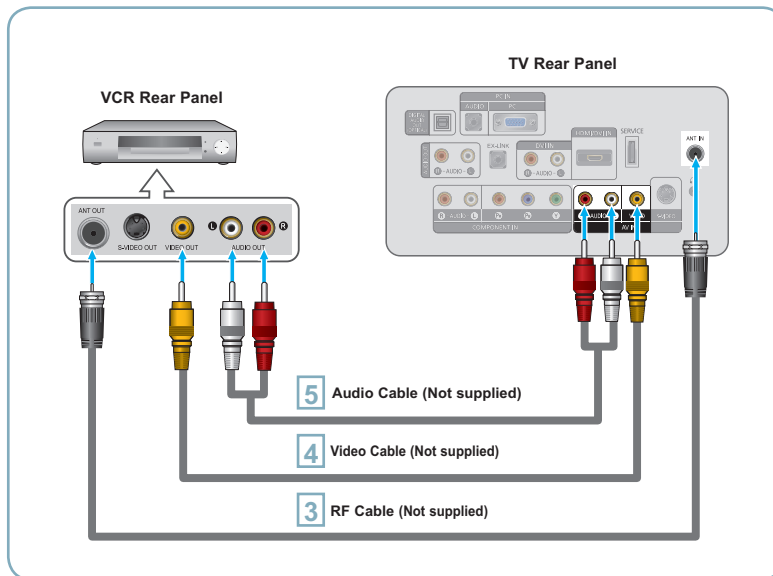
1 Connect a Video Cable (or S-Video Cable) between the AV IN [VIDEO] (or S-VIDEO) jack on the TV and the VIDEO OUT jack on the camcorder.

2 Connect Audio Cables between the AV IN [R-AUDIO-L] jacks on the TV and the AUDIO OUT jacks on the camcorder.

- Each Camcorder has a different back panel configuration.
- When connecting a Camcorder, match the color of the connection terminal to the cable.

Connecting a VCR

Video Connection



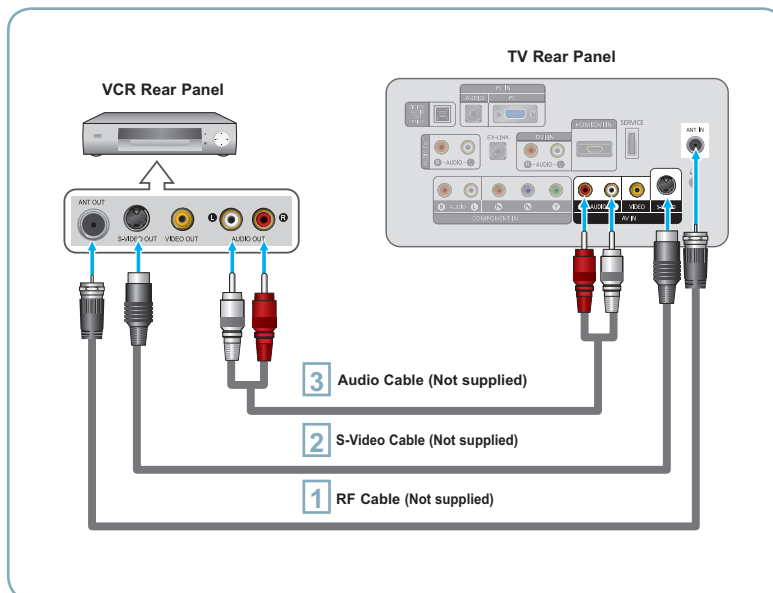
Follow the instructions in "Viewing a VCR or Camcorder Tape" to view your VCR tape.

- Each VCR has a different back panel configuration.
- When connecting a VCR, match the color of the connection terminal to the cable.

- 1 Unplug the cable or antenna from the back of the TV.
- 2 Connect the cable or antenna to the ANT IN terminal on the back of the VCR.
- 3 Connect an RF Cable between the ANT OUT terminal on the VCR and the ANT IN terminal on the TV.
- 4 Connect a Video Cable between the VIDEO OUT jack on the VCR and the AV IN [VIDEO] jack on the TV.
- 5 Connect Audio Cables between the AUDIO OUT jacks on the VCR and the AV IN [R-AUDIO-L] jacks on the TV.

➤ If you have a "mono" (non-stereo) VCR, use a Y-connector (not supplied) to hook up to the right and left audio input jacks of the TV. If your VCR is stereo, you must connect two cables.

S-Video Connection

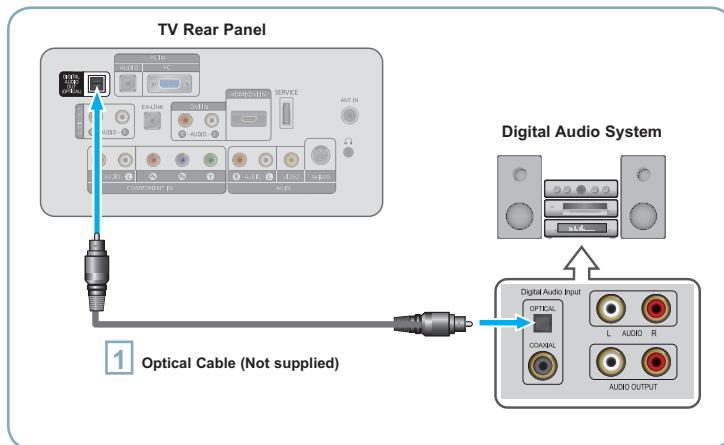


- 1 To begin, follow steps 1–3 in the previous section to connect the antenna or cable to your VCR and your TV.
- 2 Connect an S-Video Cable between the S-VIDEO OUT jack on the VCR and the AV IN [S-VIDEO] jack on the TV.
- 3 Connect Audio Cables between the AUDIO OUT jacks on the VCR and the AV IN [R-AUDIO-L] jacks on the TV.

An S-Video cable may be included with a VCR. (If not, check your local electronics store.)

- Each VCR has a different back panel configuration.
- When connecting a VCR, match the color of the connection terminal to the cable.

Connecting a Digital Audio System

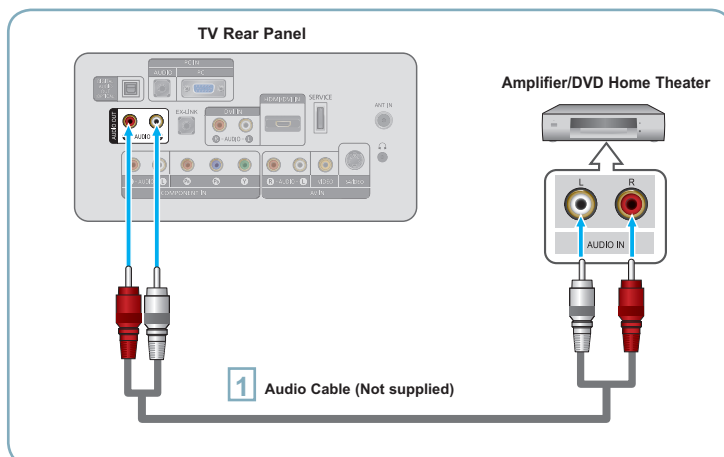


- 1 Connect an Optical Cable between the "DIGITAL AUDIO OUT (OPTICAL)" jacks on the TV and the Digital Audio Input jacks on the Digital Audio System.

When a Digital Audio System is connected to the "DIGITAL AUDIO OUT (OPTICAL)" jack: Decrease the volume of the TV and adjust the volume level with the system's volume control.

- 5.1CH audio is possible when the TV is connected to an external device supporting 5.1CH.
- Each Digital Audio System has a different back panel configuration.
- When the receiver (home theater) is set to On, you can hear sound output from the TV's Optical jack. When the TV is displaying a DTV(air) signal, the TV will send out 5.1 channel sound to the Home theater receiver. When the source is a digital component such as a DVD and is connected to the TV via HDMI, only 2 channel sound will be heard from the Home Theater receiver. If you want to hear 5.1 channel audio, connect the DIGITAL AUDIO OUT (OPTICAL) jack on the DVD player or Cable/Satellite Box directly to an Amplifier or Home Theater, not the TV.

Connecting an Amplifier/DVD Home Theater

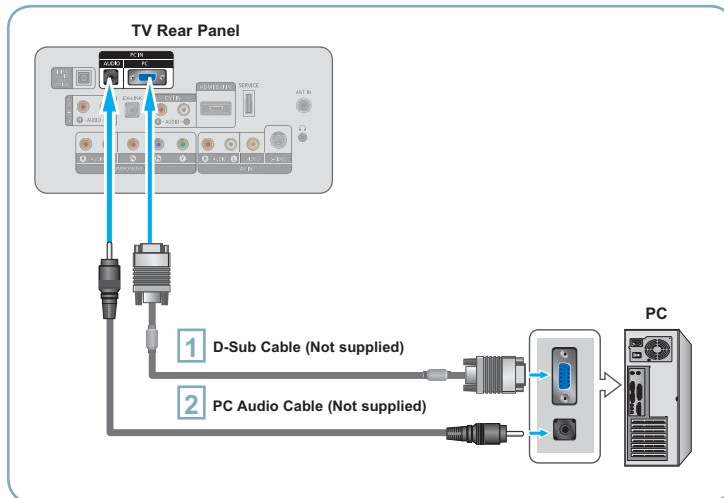


- 1 Connect Audio Cables between the AUDIO OUT [R-AUDIO-L] jacks on the TV and AUDIO IN [R-AUDIO-L] jacks on the Amplifier/DVD Home Theater.

When an audio amplifier is connected to the "AUDIO OUT [R-AUDIO-L]" jacks: Decrease the volume of the TV and adjust the volume level with the Amplifier's volume control.

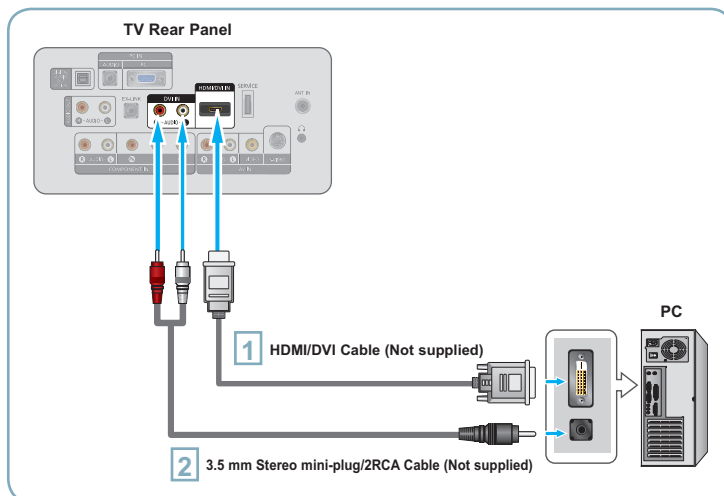
- Each Amplifier/DVD Home Theater has a different back panel configuration.
- When connecting an Amplifier/DVD Home Theater, match the color of the connection terminal to the cable.

Connecting a PC



Using the D-Sub Cable

- 1** Connect a D-Sub Cable between PC IN [PC] connector on the TV and the PC output connector on your computer.
- 2** Connect a PC Audio Cable between the PC IN [AUDIO] jack on the TV and the Audio Out jack of the sound card on your computer.



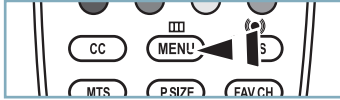
Using the HDMI/DVI Cable

- 1** Connect a HDMI/DVI cable between the HDMI/DVI IN jack on the TV and the PC output jack on your computer.
 - 2** Connect a 3.5 mm Stereo mini-plug/2RCA Cable between the DVI IN [R-AUDIO-L] jack on the TV and the Audio Out jack of the sound card on your computer.
- Each PC has a different back panel configuration.
 - When connecting a PC, match the color of the connection terminal to the cable.
 - When using an HDMI/DVI cable connection, you must use the HDMI/DVI IN jack.

Turning the TV On and Off

Press the **POWER** button on the remote control.
You can also use the **POWER** button on the TV.

Viewing the Menus

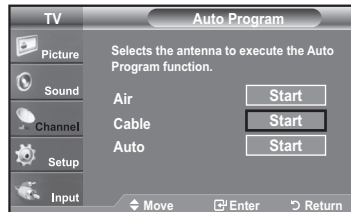


- 1 With the power on, press the **MENU** button.
The main menu appears on the screen.
The menu's left side has icons: Picture, Sound, Channel, Setup, Input.
- 2 Press the **▲** or **▼** button to select one of the icons.
Then press the **ENTER** button to access the icon's sub-menu. Press the **EXIT** button to exit.

> The on-screen menus disappear from the screen after about one minute.

Storing Channels in Memory (Automatic Method)

- 1 Press the **MENU** button to display the menu.
Press the **▲** or **▼** button to select "Channel", then press the **ENTER** button.
- 2 Press the **▲** or **▼** button to select "Auto Program", then press the **ENTER** button.
- 3 Press the **▲** or **▼** button to select the antenna connection, then press the **ENTER** button.

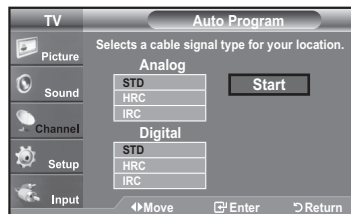


- 4 When selecting the Cable TV system:
Press the **ENTER** button to start the auto program.

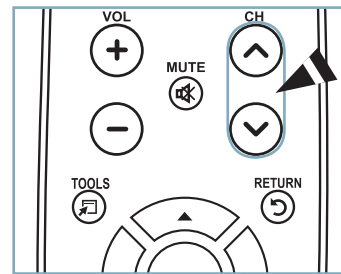
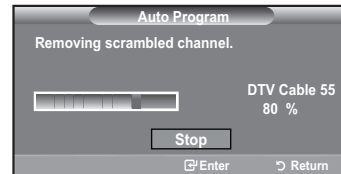
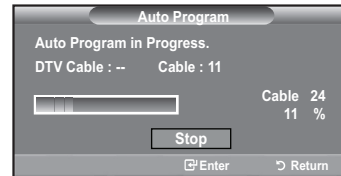
Press the **◀** or **▶** button, then press the **▲** or **▼** to select the correct analog signal cable system source among "STD", "HRC", and "IRC".

Press the **ENTER** button.

If you have Digital cable TV, select the cable system signal source for both Analog and Digital.



- 5 The TV begins memorizing all available stations.
After all the available channels are stored, it starts to remove scrambled channels.
Press the **EXIT** button to exit.



To Stop the Auto Program Function

Press the **MENU** button while the Auto Program function is being executed. You can also press the **ENTER** button to stop the setup.

Checking to see if Channels were Stored in Memory

Press the **CH** button. Only the channels stored in memory will be selected (in order).

Selecting the antennas

- **Air:** "Air" antenna signal.
- **Cable:** "Cable" antenna signal.
- **Auto:** "Air" and "Cable" antenna signals.

Setting the Channel List

Using this menu, you can Add/Delete or set Favorite channels and use the program guide for digital broadcasts. To use the Channel List function, first run "Auto Program".

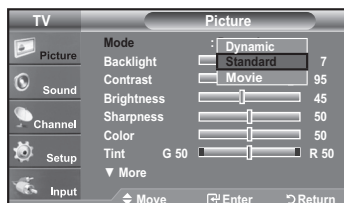
- 1 Press the **MENU** button. Press the **▲** or **▼** button to select "Channel", then press the **ENTER** button. Press the **▲** or **▼** button to select "Channel List", then press the **ENTER** button.
- 2 Press the **ENTER** button to select "All".
- 3 Press the **◀**, **▶**, **▲** or **▼** button to select a channel to delete, then press the **ENTER** button. Press the **▲** or **▼** button to select "Delete", then press the **ENTER** button to delete the channel.
- 4 Press the **◀**, **▶**, **▲** or **▼** button to select a channel to add, then press the **ENTER** button. Press the **▲** or **▼** button to select "Add", then press the **ENTER** button to add the channel.



Changing the Picture Standard

You can activate either Dynamic, Standard, Movie by making a selection from the menu.

- 1 Press the **MENU** button to display the menu. Press the **ENTER** button, to select "Picture".
- 2 Press the **ENTER** button to select "Mode". Press the **▲** or **▼** button to select "Dynamic", "Standard" or "Movie". Press the **ENTER** button.



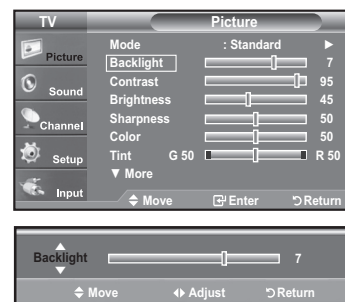
Picture Mode

- **Dynamic:** Selects the picture for high-definition in a bright room.
- **Standard:** Selects the picture for the optimum display in a normal environment.
- **Movie:** Selects the picture for viewing movies in a dark room.

Customizing the Picture Settings

Your television has several setting options that allow you to control the picture quality.

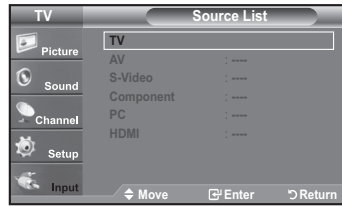
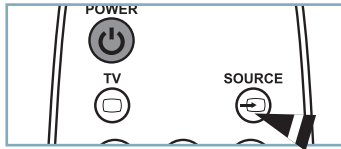
- 1 To select the desired picture mode, follow the "Changing the Picture Standard" instructions numbers 1 and 2.
- 2 Press the **▲** or **▼** button to select "Backlight", "Contrast", "Brightness", "Sharpness", "Color" or "Tint", then press the **ENTER** button.
- 3 Press the **◀** or **▶** button to decrease or increase the value of a particular item. Press the **EXIT** button to exit.
 - > When you make changes to "Backlight", "Contrast", "Brightness", "Sharpness", "Color" or "Tint", the OSD will be adjusted accordingly.
 - > In PC mode, you can only make changes to "Backlight", "Contrast" and "Brightness".
 - > Settings can be adjusted and stored for each external device you have connected to an input of the TV.



Picture Adjustment

- **Backlight:** Adjusts the brightness of LCD back light.
- **Contrast:** Adjusts the contrast level of the picture.
- **Brightness:** Adjusts the brightness level of the picture.
- **Sharpness:** Adjusts the edge definition of the picture.
- **Color:** Adjusts color saturation of the picture.
- **Tint:** Adjusts the color tint of the picture.

To Select the Source



Press the SOURCE button on the Remote Control

You can select the TV mode or an input source connected to the TV set. Use this button to choose an input source that you would like to watch.

- Available signal sources: TV, AV, S-Video, Component, PC, HDMI.
- You can choose only those external devices that are connected to the TV.

Troubleshooting

If the TV seems to have a problem, first try this list of possible problems and solutions.
If none of these troubleshooting tips apply, call your nearest Samsung service center.

Problem	Possible Solution
Poor picture	Try another channel. / Adjust the antenna. / Check all wire connections.
Poor sound quality.	Try another channel. / Adjust the antenna.
No picture or sound.	Try another channel. / Press the SOURCE button. / Make sure the TV is plugged in. / Check the antenna connections.
No sound or sound is too low at maximum volume.	First, check the volume of units connected to your TV (digital broadcasting receiver, DVD, cable broadcasting receiver, VCR, etc.). Then, adjust the TV volume accordingly.
Picture rolls vertically.	Check all wire connections.
The TV operates erratically.	Unplug the TV for 30 seconds, then try operating it again.
The TV won't turn on.	Make sure the wall outlet is working.
Remote control malfunctions	Replace the remote control batteries. Clean the upper edge of the remote control (transmission window). Check the battery terminals.
"Check signal cable" message.	Ensure that the signal cable is firmly connected to the PC source.
"Not Supported Mode" message.	Check the maximum resolution and connected device's Video frequency. Compare these values with the data in the Display Modes.
Digital broadcasting screen problem.	Please check the digital signal strength and input antenna.
The image is too light or too dark.	Adjust the Brightness and Contrast. / Adjust the Fine tuning.
Black bars on the screen.	Make sure the broadcast you're receiving is High Definition (HD). HD channels sometimes broadcast Standard Definition (SD) programming, which can cause black bars. Set your cable/satellite box to stretch or widescreen mode to eliminate the bars.
Picture has a Red/Green or Pink tint.	Make sure the Component cables are connected to the correct jacks.
Closed Captioning not working.	If you are using a Cable/Satellite box, you must set Closed Captioning on the box, not your TV.
Snowy picture.	Your cable box may need a firmware upgrade. Please contact your Cable company.
Ghosting on picture	This is sometimes caused by compatibility issues with your cable box. Try connecting Component cables instead.
Horizontal bars appear to flicker, jitter or shimmer on the image.	Adjust the Coarse tuning and then adjust the Fine tuning.
Vertical bars appear to flicker, jitter or shimmer on the image.	Adjust the Coarse tuning and then adjust the Fine tuning.
Screen is black and power indicator light blinks steadily.	On your computer check: Power, Signal Cable. The TV is using its power management system. Move the computer's mouse or press any key on the keyboard.
Image is not centered on the screen.	Adjust the horizontal and vertical position. The screen position must be adjusted on the output source (i.e. STB) with a digital signal.
The picture appears distorted in the corner of the screen.	If "Just Scan" is selected with some external devices, the picture may appear distorted in the corner of the screen. This symptom is caused by the external devices, not TV.
The "Resets all settings to the default values" message appears.	This appears when you press and hold the EXIT button for a while. The product settings are reset to the factory defaults.

**Contact SAMSUNG WORLDWIDE**

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Contacte con SAMSUNG WORLDWIDE

Si tiene alguna pregunta o comentario referente a nuestros productos, por favor contacte con nuestro Servicio de Atención al Cliente.

Country	Customer Care Center ☎	Web Site	Address
CANADA	1-800-SAMSUNG(726-7864)	www.samsung.com/ca	Samsung Electronics Canada Inc., Customer Service 55 Standish Court Mississauga, Ontario L5R 4B2 Canada
			Samsung Electronique Canada Inc., Service à la Clientèle 55 Standish Court Mississauga, Ontario L5R 4B2 Canada
U.S.A	1-800-SAMSUNG(726-7864)	www.samsung.com	Samsung Electronics America, Inc. 105 Challenger Road Ridgefield Park, NJ 07660-0511



BN68-01396B-00



Warning! Important Safety Instructions

(Please read the appropriate section that corresponds to the marking on your Samsung product before attempting to install the product.)

CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). THERE ARE NO USER SERVICEABLE PARTS INSIDE. REFER ALL SERVICING TO QUALIFIED PERSONNEL.



This symbol indicates that high voltage is present inside. It is dangerous to make any kind of contact with any internal part of this product.



This symbol alerts you that important literature concerning operation and maintenance has been included with this product.

- The slots and openings in the cabinet and in the back or bottom are provided for necessary ventilation. To ensure reliable operation of this apparatus, and to protect it from overheating, these slots and openings must never be blocked or covered.
 - Do not cover the slots and openings with a cloth or other materials.
 - Do not block the slots and openings by placing this apparatus on a bed, sofa, rug or other similar surface.
 - Do not place this apparatus in a confined space, such as a bookcase, or built-in cabinet, unless proper ventilation is provided.
 - Give your product 10 cm (4 inch) clearance from the wall.
- Do not place this apparatus near or over a radiator or heat resistor, or where it is exposed to direct sunlight.
- Do not place heat generating items such as candles, ashtrays, incense, flammable gas or explosive materials near the product.
- Do not place a water containing vessel on this apparatus, as this can result in a risk of fire or electric shock.
- Do not expose this apparatus to rain or place it near water (near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool etc.). If this apparatus accidentally gets wet, unplug it and contact an authorized dealer immediately. Make sure to pull out the power cord from the outlet before cleaning.
- This apparatus uses batteries. In your community there might be regulations that require you to dispose of these batteries properly under environmental considerations. Please contact your local authorities for disposal or recycling information.
- Do not overload wall outlets, extension cords or adaptors beyond their capacity, since this can result in fire or electric shock.
- Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plug end, adaptors and the point where they exit from the appliance.
- To protect this apparatus from a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system.

This will prevent damage to the set due to lightning and power line surges.
- Before connecting the AC power cord to the DC adaptor outlet, make sure the voltage designation of the DC adaptor corresponds to the local electrical supply.
- Never insert anything metallic into the open parts of this apparatus. Doing so may create a danger of electric shock.
- To avoid electric shock, never touch the inside of this apparatus. Only a qualified technician should open this apparatus.
- Make sure to plug the power cord in until it is firmly inserted. When removing the power cord, make sure to hold the power plug when pulling the plug from the outlet. Do not touch the power cord with wet hands.
- If this apparatus does not operate normally - in particular, if there are any unusual sounds or smells coming from it
 - unplug it immediately and contact an authorized dealer or service center.
- Be sure to pull the power plug out of the outlet if the TV is to remain unused or if you are to leave the house for an extended period of time (especially when children, elderly or disabled people will be left alone in the house).
 - Accumulated dust can cause an electric shock, an electric leakage or a fire by causing the power cord to generate sparks and heat or the insulation to deteriorate.
- Be sure to contact an authorized service center, when installing your set in a location with heavy dust, high or low temperatures, high humidity, chemical substances and where it operates for 24 hours such as the airport, the train station etc.

Failure to do so may cause serious damage to your set.
- Use only a properly grounded plug and receptacle.
 - An improper ground may cause electric shock or equipment damage. (Class I Equipment only.)
- To disconnect the apparatus from the mains, the plug must be pulled out from the mains socket, therefore the mains plug shall be readily operable.
- Do not allow children to hang onto the product.
- Store the accessories (battery, etc.) in a location safely out of the reach of children.
- Do not install the product in an unstable location such as a shaky shelf, a slanted floor or a location exposed to vibration.
- Do not drop or impart any shock to the product. If the product is damaged, disconnect the power cord and contact a service center.



WARNING - TO PREVENT THE SPREAD OF FIRE, KEEP CANDLES OR OTHER OPEN FLAMES AWAY FROM THIS PRODUCT AT ALL TIMES.



Avertissement! Consignes de sécurité importantes

(Avant toute installation de votre produit Samsung,
veuillez lire les sections correspondant aux inscriptions qui figurent sur ce produit.)

ATTENTION

RISQUE D'ELECTROCUTION NE PAS OUVRIR

ATTENTION : POUR REDUIRE LES RISQUES D'ELECTROCUTION, NE RETIREZ PAS LE CAPOT (NI LE PANNEAU ARRIERE), A L'INTERIEUR DE L'APPAREIL, AUCUNE PIECE NE PEUT ETRE REPARÉE PAR L'UTILISATEUR. POUR TOUT DEPANNAGE, ADRESSEZ-VOUS A UN SPECIALISTE.



Ce symbole indique qu'une tension élevée est présente à l'intérieur de l'appareil. Tout contact avec une pièce située à l'intérieur de cet appareil est dangereux.



Ce symbole vous prévient qu'une documentation importante relative au fonctionnement et à l'entretien est fournie avec le produit.

- Les fentes et les ouvertures ménagées dans le boîtier ainsi qu'à l'arrière et au-dessous de l'appareil assurent la ventilation de ce dernier. Afin de garantir le bon fonctionnement de l'appareil et éviter les risques de surchauffe, ces fentes et ouvertures ne doivent être ni obstruées ni couvertes.
 - Ne couvrez pas les fentes et les ouvertures avec un morceau de tissu ou tout autre objet.
 - Ne les obstruez pas non plus en plaçant l'appareil sur un lit, un canapé, un tapis ou toute autre surface apparentée.
 - Ne placez pas l'appareil dans un environnement clos tel qu'une bibliothèque ou une armoire encastrée, sauf si une ventilation adéquate est prévue.
 - Placez votre produit à 10 cm du mur.
- Ne placez pas l'appareil à proximité ou au-dessus d'un radiateur ou d'une bouche d'air chaud, de même que dans un endroit exposé à la lumière directe du soleil.
- Ne placez aucun élément thermogène tel que des bougies, des cendriers, de l'encens, des gaz inflammables ou des matières explosives à proximité du produit.
- Ne placez aucun récipient d'eau sur l'appareil car cela représente un risque d'incendie ou de décharge électrique.
- N'exposez pas l'appareil à la pluie et ne le placez pas à proximité d'une source d'eau, par exemple une baignoire, un lavabo, un évier, un bac de lavage, un sous-sol humide, une piscine, etc. Si l'appareil vient à être mouillé par accident, débranchez-le et contactez immédiatement un revendeur agréé. Assurez-vous que le cordon d'alimentation est débranché avant de nettoyer le produit.
- Cet appareil peut fonctionner sur piles. Dans un souci de préservation de l'environnement, la réglementation locale prévoit peut-être des mesures spécifiques de récupération des piles usagées. Veuillez donc contacter les autorités compétentes afin d'obtenir des informations sur la mise au rebut ou le recyclage des piles.
- Evitez de surcharger les prises murales, les rallonges et les prises multiples car cela entraîne un risque d'incendie ou de décharge électrique.
- Les cordons d'alimentation doivent être déroulés de sorte qu'aucun objet placé sur ou contre eux ne les chevauche ou les pince. Accordez une attention particulière aux cordons au niveau des fiches, des prises et de la sortie de l'appareil.
- En cas d'orage, ou bien lorsque vous vous absentez ou n'utilisez pas votre appareil pendant une longue période, débranchez celui-ci de la prise murale et débranchez également le câble d'antenne ou le cordon de connexion au réseau câblé. Ces précautions éviteront que l'appareil ne soit endommagé par la foudre ou par des surtensions.
- Avant de raccorder le cordon d'alimentation CA à la prise de l'adaptateur CC, vérifiez que la tension indiquée sur ce dernier correspond bien à la tension délivrée par le réseau électrique local.
- N'insérez aucun objet métallique dans les ouvertures de l'appareil, vous risqueriez de recevoir une décharge électrique.
- Afin d'éviter tout risque d'électrocution, ne mettez jamais les doigts à l'intérieur de l'appareil. Seul un technicien qualifié est habilité à ouvrir le boîtier de l'appareil.
- Assurez-vous de bien brancher le cordon d'alimentation. Assurez-vous de bien tenir la prise en main lorsque vous la débranchez. Ne touchez en aucune circonstance le cordon d'alimentation avec les mains mouillées.
- Si l'appareil ne fonctionne pas normalement, en particulier s'il émet des odeurs ou des sons anormaux, débranchez-le immédiatement et contactez un revendeur ou un centre de dépannage agréé.
- Veillez à bien débrancher le cordon d'alimentation si la télévision doit rester inutilisée, ou lorsque vous quittez votre domicile, pendant une période assez longue (et plus spécialement si des enfants, des personnes âgées ou des majeurs incapables doivent rester seuls à votre domicile).
 - L'accumulation de poussières peut provoquer une électrocution, une perte d'énergie, ou un incendie induit par le cordon d'alimentation, dû à des variations de tension, une surchauffe ou une détérioration de l'isolation.
- Veillez à contacter un centre de services homologué lorsque vous installez votre téléviseur dans un endroit très poussiéreux, humide, exposé à des températures élevées ou faibles ou à des produits chimiques, ou s'il fonctionne sans interruption, par exemple dans les aéroports, les gares, etc. Si vous ne le faites pas, vous risquez d'endommager gravement votre téléviseur.
- Utilisez uniquement des prises correctement reliées à la terre.
 - Un sol inadéquat peut causer un choc électrique ou un incendie. (Appareils de CLASSE I uniquement.)
- Pour déconnecter l'appareil du secteur, la prise doit être débranchée de la prise électrique du secteur. Par conséquent, la prise du secteur doit être en état de marche.
- Utilisez uniquement des prises correctement reliées à la terre.
- Rangez les accessoires (batterie, etc.) dans un endroit sûr, hors de la portée des enfants.
- N'installez pas le produit sur une surface instable telle qu'une étagère chancelante, un sol non horizontal ou un endroit soumis à des vibrations.
- Ne faites ni tomber, ni subir de choc au produit. Si le produit est endommagé, déconnectez le cordon d'alimentation et contactez un centre de services.



AVERTISSEMENT - POUR ÉVITER TOUT RISQUE D'INCENDIE, VEILLEZ À GARDER CE PRODUIT LOIN DE BOUGIES OU D'AUTRES SOURCES DE FEU.



Advertencia! Instrucciones importantes de seguridad

(Lea la sección apropiada que corresponde a la
marca del producto Samsung antes de intentar instalar el producto.)

PRECAUCIÓN

PELIGRO DE DESCARGA ELÉCTRICA NO ABRIR

PRECAUCIÓN: PARA REDUCIR EL PELIGRO DE DESCARGA ELÉCTRICA, NO RETIRE LA CUBIERTA. NO HAY PIEZAS EN EL INTERIOR QUE PUEDA REPARAR EL USUARIO. CONSULTE AL PERSONAL CALIFICADO DE SERVICIO TÉCNICO.



Este símbolo indica la presencia de alto voltaje en el interior. Es peligroso entrar en contacto con cualquier pieza interior de este producto.



Este símbolo le alerta de que con este producto se incluye documentación importante correspondiente al funcionamiento y mantenimiento.

- Las ranuras y aberturas existentes en la unidad y en la parte trasera o inferior se facilitan para proporcionar la ventilación necesaria. Para garantizar el funcionamiento fiable de este aparato, y para protegerlo frente a sobrecalentamiento, estas ranuras y aberturas nunca deben bloquearse ni cubrirse.
 - No cubra las ranuras y aberturas con un paño o con cualquier otro material.
 - No bloquee las ranuras ni aberturas colocando este aparato sobre la cama, sofá, alfombra o superficie similar.
 - No coloque este aparato en un espacio cerrado, como una librería, o un armario empotrado, a menos que se proporcione una ventilación correcta.
 - Separe el producto 10 cm de la pared.
- No coloque este aparato cerca o sobre un radiador o una rejilla de aire caliente, o en lugares expuestos a luz solar directa.
- No coloque el producto cerca de elementos que generen calor, como velas, ceniceros, incensarios, aparatos de gas o materiales explosivos.
- No coloque recipientes con agua sobre este aparato, ya que podría representar riesgo de incendio o descarga eléctrica.
- No exponga este aparato a la lluvia ni lo coloque cerca de agua (cerca de una bañera, lavabo, fregadero o lavadero, en un sótano húmedo ni cerca de una piscina o similar). Si este aparato accidentalmente se moja, desenchúfelo y póngase en contacto inmediatamente con un técnico autorizado. Antes de limpiar el producto desconecte el cable de alimentación de la toma de corriente.
- Este aparato utiliza baterías. En su comunidad puede que existan normativas que requieran la disposición de estas baterías de forma adecuada bajo consideraciones ambientales. Póngase en contacto con las autoridades locales para obtener información sobre desecho y reciclaje.
- No sobrecargue las tomas murales, los alargadores ni los receptáculos correspondientes por encima de su capacidad, ya que esto puede generar incendios o descargas eléctricas.
- Los cables de alimentación y protección deben colocarse de forma que no puedan pisarse ni quedar atrapados por objetos encima o contra ellos, poniendo especial atención en los cables cerca del enchufe, los receptáculos de los electrodomésticos y el punto en el que salen del aparato.
- Para proteger este aparato durante una tormenta eléctrica o cuando no lo utilice durante largos periodos de tiempo, desenchúfelo de la toma de la pared y desconecte la antena o el cable del sistema. Esto evitará que el equipo se dañe por rayos o picos de tensión de la línea eléctrica.
- Antes de conectar el cable de alimentación de CA a la toma del adaptador de CC, asegúrese de que la designación del voltaje del adaptador de CC corresponde a la fuente eléctrica local.
- Nunca inserte nada metálico en las aberturas del aparato. Hacerlo así puede crear peligros de descarga eléctrica.
- Para evitar descarga eléctrica, no toque nunca el interior de este aparato. Sólo un técnico calificado debe abrir el alojamiento del aparato.
- Cuando conecte el cable de alimentación compruebe que el enchufe esté firmemente insertado. Para desenchufar el cable de alimentación, sujételo por el enchufe y tire de éste para sacarlo de la toma de corriente. Nunca toque el cable de alimentación con las manos mojadas.
- Si este aparato no funciona normalmente, en concreto, si emite sonidos extraños o desprende olores desde el interior, desenchúfelo inmediatamente y póngase en contacto con el distribuidor autorizado o el centro de servicio técnico.
- Asegúrese de desconectar el enchufe de alimentación de la toma de corriente si la TV ha dejado de utilizarse, o desea salir de casa, durante un largo periodo de tiempo (especialmente cuando sea necesario dejar solos en casa a niños, ancianos o personas incapaces).
- El polvo acumulado puede provocar una descarga eléctrica, un cortocircuito o un fuego, haciendo que el cable eléctrico genere chispas y calor, o deteriorando la funda protectora.
- Póngase en contacto con un centro de servicio técnico autorizado cuando instale el aparato en un lugar expuesto a gran cantidad de polvo, temperaturas extremas, alto nivel de humedad y productos químicos, y en lugares donde se vaya a utilizar las 24 horas del día, como aeropuertos, estaciones, etc. El incumplimiento de estas indicaciones puede causar serios desperfectos en el aparato.
- Cuando instale el equipo, procure guardar una distancia de más de 10 cm desde la pared para facilitar la ventilación.
- Use solamente conectores y receptáculos apropiados para hacer la conexión a tierra.
 - Una conexión a tierra inapropiada podría causar una descarga eléctrica o una avería en el equipo. (Sólo equipo de Clase I.)
- Para desconectar el aparato de la corriente, debe desenchufar el cable de la toma principal, por lo que el enchufe principal debe estar siempre fácilmente accesible.
 - No permita que los niños jueguen con el producto.
- Guarde los accesorios (pilas, etc.) en un lugar seguro fuera del alcance de los niños.
- No coloque el producto en un lugar inestable, inclinado o expuesto a vibraciones.
- No lo deje caer ni le dé golpes. Si el producto se estropea, desenchufe el cable de alimentación y póngase en contacto con un centro de servicio.



ADVERTENCIA - PARA IMPEDIR QUE EL FUEGO SE PROPAGUE, MANTENGA LAS VELAS U OTRAS LLAMAS EXPUESTAS SIEMPRE ALEJADAS DE ESTE PRODUCTO.

Aviso! Instruções de segurança importantes

(Leia a secção adequada que corresponde à marca no produto Samsung antes de tentar instalar o produto.)

ATENÇÃO

STROMSCHLAGEFAHR NICHT ÖFFNEN

CUIDADO: PARA REDUZIR O RISCO DE CHOQUE ELÉCTRICO, NÃO RETIRE A TAMPÃO (NEM A PARTE TRASEIRA) NO INTERIOR DO TELEVISOR NÃO EXISTEM PEÇAS QUE POSSAM SER REPARADAS PELO UTILIZADOR. A ASSISTÊNCIA SÓ PODE SER EFECTUADA POR TÉCNICOS QUALIFICADOS.



Este símbolo indica a existência de alta tensão no interior do televisor. É perigoso tocar em qualquer parte no interior do produto.



Este símbolo informa-o de que este produto inclui literatura importante sobre o respectivo funcionamento e manutenção.

- As ranhuras e aberturas na caixa e na parte posterior ou inferior permitem a ventilação necessária. Para garantir o funcionamento correcto do aparelho e para o proteger do sobreaquecimento, nunca deve bloquear ou tapar estas ranhuras e aberturas.
 - Não tape as ranhuras e aberturas com panos ou outros materiais.
 - Não bloqueie as ranhuras e aberturas colocando o aparelho numa cama, sofá, tapete ou outra superfície semelhante.
 - Não coloque este aparelho num espaço fechado, como uma estante ou um armário embutido, a menos que tenha ventilação adequada.
 - Deixe uma distância de 10 cm entre o produto e a parede.
- Não coloque este aparelho perto ou por cima de um radiador, sistema de aquecimento ou num local em que esteja exposto à incidência directa dos raios solares.
- Não coloque objectos geradores de calor, tais como, velas, cinzeiros, incenso, gás inflamável ou materiais explosivos perto do produto.
- Não coloque recipientes com água em cima do aparelho, porque pode provocar um incêndio ou choque eléctrico.
- Não exponha o aparelho à chuva nem coloque em locais perto de água (perto de uma banheira, lavatório, lava-loiça, tubo da máquina de lavar a loiça, piscina ou numa cave com humidade). Se molhar acidentalmente o aparelho, desligue-o da ficha e contacte de imediato o revendedor autorizado. Retire sempre o cabo de alimentação da tomada antes de limpar o produto.
- Este aparelho tem pilhas. Deite fora as pilhas adequadamente de acordo com as considerações ambientais existentes no seu país. Contacte as autoridades locais para obter informações sobre a destruição ou reciclagem de pilhas.
- Não sobrecarregue tomadas de parede, extensões nem receptáculos, porque pode provocar um incêndio ou choque eléctrico.
- Deve colocar os cabos de alimentação de forma a não serem pisados nem entalados por objectos, tendo em especial atenção os cabos ligados a fichas, a receptáculos e ao ponto de onde os cabos saem do aparelho.
- Para proteger o aparelho de trovoadas, ou quando não for utilizá-lo durante longos períodos de tempo, desligue o aparelho da tomada de parede e desligue a antena ou o sistema de televisão por cabo.
 - Deste modo, o aparelho não sofre eventuais danos provocados por raios e descargas em cabos de alta tensão.
- Antes de ligar o cabo de alimentação de CA à tomada do transformador de CC, certifique-se de que a designação de tensão do transformador de CC corresponde à alimentação eléctrica local.
- Nunca introduza objectos metálicos nas aberturas do aparelho. Se o fizer, pode provocar choques eléctricos.
- Para evitar choques eléctricos, nunca toque no interior do aparelho.
 - A caixa do aparelho só deve ser aberta por técnicos qualificados.
- Introduza o cabo de alimentação completamente até ao fim. Quando retirar o cabo de alimentação, certifique-se de que o segura pela ficha quando puxar a mesma da tomada. Não toque no cabo de alimentação com as mãos molhadas.
- Se o aparelho não funcionar normalmente - em particular, se o aparelho emitir ruídos ou cheiros invulgares - desligue o aparelho de imediato e contacte o revendedor autorizado ou centro de assistência técnica.
- Certifique-se de que retira a ficha de alimentação da tomada se o aparelho de televisão não for utilizado ou se o utilizador não estiver em casa durante um período de tempo longo (especialmente quando crianças, idosos ou pessoas com deficiências forem deixadas sozinhas em casa).
 - Poeira acumulada pode provocar um choque eléctrico, uma fuga eléctrica ou um incêndio, fazendo com que o fio de alimentação produza faíscas e aqueça ou deteriore o isolamento.
- Contacte um centro autorizado de assistência técnica quando instalar o produto em locais sujeitos a poeiras excessivas, locais sujeitos a temperaturas altas ou baixas, locais com muita humidade, locais onde se utilizem substâncias químicas e locais onde o monitor esteja a funcionar 24 horas por dia como em aeroportos, estações de comboio, etc.
 - Se não o fizer, pode provocar sérios danos no produto.
- Utilize uma ficha e uma tomada devidamente ligadas à terra.
 - Uma ligação de terra deficiente pode causar choque eléctrico ou danos no equipamento. (Só equipamento de classe I.)
- Deve puxar a ficha da tomada para desligar o aparelho da corrente, de forma a deixar a ficha pronta a ser utilizada.
- Não deixe as crianças mexer no produto.
- Guarde os acessórios (bateria, etc.) num local seguro fora do alcance das crianças.
- Não instale o produto num local instável, como uma prateleira inclinada, um chão desnívelado ou um local exposto à vibração.
- Não deixe cair ou provoque qualquer embate no produto. Se o produto estiver danificado, desligue o cabo de alimentação e contacte um centro de assistência.



AVISO - PARA EVITAR O ALAISTRAR DE UM INCÊNDIO, MANTENHA SEMPRE AS VELAS OU OUTRO TIPO DE CHAMA LONGE DESTA PRODUTO.

Regulatory Compliance Statements

Your Samsung product is marked to indicate its compliance class

- Federal Communications Commission (FCC) - USA
- Industry Canada Equipment Standard for Digital Equipment (ICES-003) - Canada
- Voluntary Control Council for Interference (VCCI) - Japan
- Bureau of Standards Metrology and Inspection (BSMI) - Taiwan
- Ministry of Information and Communication (MIC) - Republic of Korea
- Italian Post Ministry (Homologation) - Italy

FCC Class A Notice

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

NOTE:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Class B Notice

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

User Information

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. If necessary, consult with your dealer or an experienced radio/television technician for additional suggestions. You may find the booklet called How to Identify and Resolve Radio/TV Interference Problems helpful. This booklet was prepared by the Federal Communications Commission. It is available from the U.S. Government Printing Office, Washington, DC 20402, Stock Number 004-000-00345-4.

The party responsible for product compliance:

SAMSUNG ELECTRONICS CO., LTD.
America QA Lab of Samsung
3351 Michelson Drive
Suite #290, Irvine, CA92612 USA

Warning

User must use shielded signal interface cables to maintain FCC compliance for the product. Provided with this monitor is a detachable power supply cord with IEC320 style terminations. It may be suitable for connection to any UL Listed personal computer with similar configuration. Before making the connection, make sure the voltage rating of the computer convenience outlet is the same as the monitor and that the ampere rating of the computer convenience outlet is equal or exceeds the monitor voltage rating. For 120 Volt applications, use only UL Listed detachable power cord with NEMA configuration 5-15P type (parallel blades) plug cap. For 240 Volt applications use only UL Listed detachable power supply cord with NEMA configuration 6015P type (tandem blades) plug cap. This television receiver provides display of television closed captioning in accordance with Section 15.119 of the FCC rules. (TV broadcast receivers with picture screens 13 inches or larger in diameter models only)

ICES-003 Class A Notice - Avis NMB-003, Classe A

This Class A digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

ICES-003 Class B Notice - Avis NMB-003, Classe B

This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

VCCI Class A Notice

この装置は、情報処理装置等電波障害自主規制協議 (VCCI) の基準に基づくクラスA情報技術装置です。
この装置は、家庭環境で使用すると電波妨害を引き起こすことがあります。
この場合には使用者が適切な対策を講ずるよう要求されることがあります。

VCCI Class B Notice

この装置は、情報処理装置等電波障害自主規制協議 (VCCI) の基準に基づくクラスB情報技術装置です。
この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。
取扱説明書に従って正しい取り扱いをして下さい。

BSMI Class A Notice

The following statement is applicable to products shipped to Taiwan and marked as Class A on the product compliance label.

警告使用者：

這是甲類資訊類產品，在居住環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。



European Notice(Europe Only)

Products with the CE marking comply with the EMC Directive(89/336/EEC), (92/31/EEC), (93/68/EEC) and the Low Voltage Directive(73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Norms:

- EN55022: Radio Frequency Interference
- EN55024: Electromagnetic Immunity of Information Technology Equipment
- EN61000-3-2: Power Line Harmonics
- EN61000-3-3: Voltage Fluctuations
- EN55013: Radio disturbance characteristics of broadcast receivers and associated equipments
- EN55020: Electromagnetic immunity of broadcast receivers and associated equipments

European Class A Warning

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.(Class A product only)

정보통신기기 A급기기 (MIC Class A Notice)



이 기기는 업무용으로 전자파 적합등록을 한 기기이오니 판매자 또는 사용자는 이 점을 주의하시기 바라며
만약 잘못된 판매 또는 구입하였을 때에는 가정용으로 교환하시기 바랍니다.

정보통신기기 B급기기 (MIC Class B Notice)

이 기기는 가정용으로 전자파 적합등록을 한 기기로서 주거지역에서는 물론 모든 지역에서 사용할 수 있습니다.

Italian Homologation Notice

Questo apparecchio è fabbricato in conformità al D.M.28.08.95 n.548
ed in particolare a quanto specificato nell'Art.2, comma 1.
Questo apparecchio è fabbricato nella U.E. in conformità al D.M.28.08.95 n.548
Art.2, comma 1 ed al D.M.26.03.92 Art.1
- For products produced in countries except European Community
Questo apparecchio è fabbricato in conformità al D.M.28.08.95 n.548
ed in particolare a quanto specificato nell'Art.2, comma 1.
- For products produced in European Community
Questo apparecchio è fabbricato nella U.E. in conformità al D.M.28.08.95 n.548
Art.2, comma 1 ed al D.M.26.03.92 Art.1

Important Safety Instructions(UL Only)



- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings, Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

WARNING: To prevent damage which may result in fire or electric shock hazard, do not expose this appliance to rain or moisture.

• Optional

1. Do not place the apparatus in a rack or bookcase. Ensure that there is adequate ventilation and that you've followed that manufacturer's instructions for mounting. (For PDP or Projection TV apparatus)
2. If you place the apparatus in a rack or bookcase, ensure that there is adequate ventilation and that you've followed the manufacturer's instructions.

MPR II Compliance (MPR II applied model only)

This monitor complies with SWEDAC(MPR II) recommendations for reduced electric and magnetic fields.

• EPA applied model only

As an ENERGY STAR Partner, Samsung has determined that this product or product models meets the ENERGY STAR guidelines for energy efficiency.



Mercury Statement (LCD Monitor, LCD TV, DLP Projection TV, Projector for USA only)

(Hg) LAMP(S) INSIDE THIS PRODUCT CONTAIN MERCURY AND MUST BE RECYCLED OR
DISPOSED OF ACCORDING TO LOCAL, STATE OR FEDERAL LAWS
For details see lamprecycle.org, eia.org, or call 1-800-Samsung



SAMSUNG COLOR TELEVISION & PROJECTION TELEVISION

LIMITED WARRANTY TO ORIGINAL PURCHASER

This SAMSUNG brand product, as supplied and distributed by SAMSUNG and delivered new, in the original carton to the original consumer purchaser, is warranted by SAMSUNG against manufacturing defects in materials and workmanship for a limited warranty period of:

**Color Television: One (1) Year Parts and Labor, except Two (2) Years Parts Warranty
for Picture Tube (CRT)* only on Analog Color Televisions**
Projection Television: One (1) Year Parts and Labor, including Picture Tubes (CRT)*
LCD TV: One (1) Year Parts and Labor, including Display Panels
Plasma Display: Two (2) Year Parts and Labor, including Display Panels
DLP Projection TV: One (1) Year Parts and Labor, including Display Panels
(*90 Days Parts and Labor for Commercial Use)

This limited warranty begins on the original date of purchase, and is valid only on products purchased and used in the United States. To receive warranty service, the purchaser must contact SAMSUNG for problem determination and service procedures. Warranty service can only be performed by a SAMSUNG authorized service center. The original dated bill of sale must be presented upon request as proof of purchase to SAMSUNG or SAMSUNG's authorized service center.

SAMSUNG will repair or replace this product, at our option and at no charge as stipulated herein, with new or reconditioned parts or products if found to be defective during the limited warranty period specified above. All replaced parts and products become the property of SAMSUNG and must be returned to SAMSUNG. Replacement parts and products assume the remaining original warranty, or ninety (90) days, whichever is longer.

For 26" and larger televisions (for LCD TV, 32" and larger), in-home service will be provided during the warranty labor period subject to availability within the contiguous United States. In-home service is not available in all areas. To receive in-home service, the product must be unobstructed and accessible to service personnel. If during in-home service repair can not be completed, it may be necessary to remove, repair and return the product. If in-home service is unavailable, SAMSUNG may elect, at our option, to provide for transportation of our choice to and from a SAMSUNG authorized service center. Otherwise, and for 25" and smaller televisions, transportation to and from the SAMSUNG authorized service center is the responsibility of the purchaser.

This limited warranty covers manufacturing defects in materials and workmanship encountered in normal, and except to the extent otherwise expressly provided for in this statement, noncommercial use of this product, and shall not apply to the following, including, but not limited to: damage which occurs in shipment; delivery and installation; applications and uses for which this product was not intended; altered product or serial numbers; cosmetic damage or exterior finish; accidents, abuse, neglect, fire, water, lightning or other acts of nature; use of products, equipment, systems, utilities, services, parts, supplies, accessories, applications, installations, repairs, external wiring or connectors not supplied or authorized by SAMSUNG which damage this product or result in service problems; incorrect electrical line voltage, fluctuations and surges; customer adjustments and failure to follow operating instructions, cleaning, maintenance and environmental instructions that are covered and prescribed in the instruction book; reception problems and distortion related to noise, echo, interference or other signal transmission and delivery problems; picture tube (CRT) brightness related to normal aging, or burned-in images. SAMSUNG does not warrant uninterrupted or error-free operation of the product.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE LISTED AND DESCRIBED ABOVE, AND NO WARRANTIES WHETHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, SHALL APPLY AFTER THE EXPRESS WARRANTY PERIODS STATED ABOVE, AND NO OTHER EXPRESS WARRANTY OR GUARANTY GIVEN BY ANY PERSON, FIRM OR CORPORATION WITH RESPECT TO THIS PRODUCT SHALL BE BINDING ON SAMSUNG. SAMSUNG SHALL NOT BE LIABLE FOR LOSS OF REVENUE OR PROFITS, FAILURE TO REALIZE SAVINGS OR OTHER BENEFITS, OR ANY OTHER SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES CAUSED BY THE USE, MISUSE OR INABILITY TO USE THIS PRODUCT, REGARDLESS OF THE LEGAL THEORY ON WHICH THE CLAIM IS BASED, AND EVEN IF SAMSUNG HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. NOR SHALL RECOVERY OF ANY KIND AGAINST SAMSUNG BE GREATER IN AMOUNT THAN THE PURCHASE PRICE OF THE PRODUCT SOLD BY SAMSUNG AND CAUSING THE ALLEGED DAMAGE. WITHOUT LIMITING THE FOREGOING, PURCHASER ASSUMES ALL RISK AND LIABILITY FOR LOSS, DAMAGE OR INJURY TO PURCHASER AND PURCHASER'S PROPERTY AND TO OTHERS AND THEIR PROPERTY ARISING OUT OF THE USE, MISUSE OR INABILITY TO USE THIS PRODUCT SOLD BY SAMSUNG NOT CAUSED DIRECTLY BY THE NEGLIGENCE OF SAMSUNG. THIS LIMITED WARRANTY SHALL NOT EXTEND TO ANYONE OTHER THAN THE ORIGINAL PURCHASER OF THIS PRODUCT, IS NONTRANSFERABLE AND STATES YOUR EXCLUSIVE REMEDY.

Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

To obtain warranty service, please contact SAMSUNG at:

Samsung Electronics America, Inc.
105 Challenger Road
Ridgefield Park, NJ 07660-0511
1-800-SAMSUNG (7267864) - www.samsung.com

IMPORTANT WARRANTY INFORMATION REGARDING TELEVISION FORMAT VIEWING

Standard screen format televisions (4:3, the aspect ratio of the screen width to height) are primarily designed to view standard format full-motion video. The images displayed on them should primarily be in the standard 4:3 ratio format and constantly moving. Displaying stationary graphics and images on screen, such as the dark top and bottom letterbox bars (wide screen pictures), should be limited to no more than 15% of the total television viewing per week.

Wide screen format televisions (16:9, the aspect ratio of the screen width to height) are primarily designed to view wide screen format full-motion video. The images displayed on them should primarily be in the wide screen 16:9 ratio format, or expanded to fill the screen if your model offers this feature, and constantly moving. Displaying stationary graphics and images on screen, such as the dark side-bars on non-expanded standard format television video and programming, should be limited to no more than 15% of the total television viewing per week.

Additionally, viewing other stationary images and text such as stock market reports, video game displays, station logos, web sites or computer graphics and patterns, should be limited as described above for all televisions. Displaying any stationary images that exceed the above guidelines can cause uneven aging of picture tubes (CRTs) or Plasma Display Panels that leave subtle, but permanent burned-in ghost images in the television picture. To avoid this, vary the programming and images, and primarily display full screen moving images, not stationary patterns or dark bars. On television models that offer picture sizing features, use these controls to view the different formats as a full screen picture.

Be careful in the selection and duration of television formats used for viewing. Uneven CRT or Plasma Display Panels aging as a result of format selection and use, as well as other burned-in images, is not covered by your Samsung limited warranty.